

Mitt. Münch. Ent. Ges.	78	127–154	München, 1. 12. 1988	ISSN 0340–4943
------------------------	----	---------	----------------------	----------------

A revision of the genus *Dasytiscus* KIESENWETTER, 1859

(Coleoptera, Melyridae, Dasytinae)

By Karel MAJER

Abstract

The genus *Dasytiscus* KIESW. is revised, 18 species are placed in the genus, from which 9 are described as new: *Dasytiscus klapperichi* sp. n. (Afghanistan), *D. minotaurus* sp. n. (Crete), *D. bladili* sp. n. (Turkey), *D. schereri* (Israel, Jordan), *D. fallax* sp. n. (Israel, Jordan, Syria), *D. simulator* sp. n. (Israel), *D. hissarus* (Tadjikistan, USSR), *D. pal-lens* (Iran), and *D. jordanicus* sp. n. (Jordan). The species *Dasytes minimus* J. SAHLBERG, 1903 is placed in *Dasytiscus* for the first time.

Cardinal specific characters are illustrated and the species are keyed. Male as well as female copulatory organs are the main distinguishing criteria.

Introduction

The paper follows up my generic revision of the tribe Chaetomalachiini (MAJER, in press b), where a. o. the genus *Dasytiscus* KIESW. is re-defined in a strict conception. This is why the genus is neither defined nor keyed among similar genera in the present work. The dissecting technique used here for the female copulatory organs is the same as in my paper dealing with *Dasytidius*-species from the Balkans and Turkey (MAJER, in press c).

Abbreviations

- BMNH = British Museum, Nat. Hist., London, U. K.
- IPE = Institut für Pflanzenschutzforschung, Eberswalde, GDR
- IZW = Instytut Zoologiczny PAN, Warszawa, Poland
- KMB = Author's private collection, Brno, Czechoslovakia
- MCM = Museo Civico di Storia Naturale, Milano, Italy
- MHNP = Muséum National d'Histoire Naturelle, Paris, France
- MLU = Museum of Zoology and Entomology, Lund University, Sweden
- MUH = Museum of the University, Helsinki, Finland
- NHMB = Naturhistorisches Museum Basel, Switzerland
- NMP = Národní Muzeum, Praha, Czechoslovakia
- RC = Private collection of Dr Robert Constantin, Saint-Lô, France
- ZMB = Zoologisches Museum, Humboldt Universität, Berlin, GDR
- TMB = Természettudományi Múzeum, Budapest, Hungary
- ZSM = Zoologische Staatssammlung, München, FRG

Key to species

- 1 Pronotum of a characteristic shape (see Fig. 20), sides arcuate with distinctive marginal denticles and with long (mostly dark) bristles. Both winged and wingless specimens occur within the species 17. *D. hebraicus* BOURG.
- Pronotum of another shape. Winged or apterous species 2
- 2 Apterous species. Pubescence single, extremely fine, quite decumbent. Body resembling that of the genus *Amauronia* WESTW. (= *Aphyctus* DUV.) (Figs 21,22) 18. *D. jordanicus* sp. n.
- Winged species. Body of another shape 3
- 3 Tips of elytra truncate on inner side, chiefly in males (Figs 12, 14) 12. *D. praecox* (KÜSTER)
- Tips of elytra more or less rounded respectively 4
- 4 Pronotum with long dark bristles on upper surface (Figs 1–9, 11) 5
- Pronotum only with marginal (mostly pale) setae (Figs 10, 15–19) 14
- 5 Pronotum more slender than elytra (Fig. 1), extremities long, body resembles that of the genus (*Dasytes* F. Femora infusate, tibiae and tarsi testaceous. Afghanistan 1. *D. klapperichi* sp. n.
- Pronotum scarcely more slender than elytra, extremities shorter, body more or less cylindrical 6
- 6 Submarginal pronotal lines more or less distinct 7
- Submarginal pronotal lines at most indicated only 10
- 7 Submarginal lines clearly developed (Fig. 3) 3. *D. impressicollis* REITT.
- Submarginal lines less developed (Figs 4,5,9) 8
- 8 Small flavous species with expressive black eyes and black bristles (Fig. 9) 9. *D. flaveolus* REITT.
- Larger dark fuscous to black species 9
- 9 Pronotum more transverse, strongly convex, sides arcuate. Submarginal pronotal lines less distinct (Fig. 5) 5. *D. minotauros* sp. n.
- Pronotum less transverse, less convex, sides subarcuate, submarginal lines somewhat more distinct (Fig. 4) 4. *D. rufitarsis* (LUCAS).
- 10 Coloration testaceous or rufotestaceous, rufopiceous and/or bicolorous 11
- Coloration unicolorous, dark (piceous to black) 12
- 11 Larger species (1.9–2.7 mm). Pronotum more transverse and very strongly arcuate at sides (Fig. 7.). Colour patterns as on Fig. 23 A–E 7. *D. heydeni* REITT.
- Smaller species (1.6–2.4 mm). Pronotum less transverse with subarcuate (Fig. 8). Colour patterns as on Fig. 24 A–E 8. *D. minimus* (J. SAHLB.)
- 12 Sides of pronotum subarcuate, black bristles short (Fig. 11). Submarginal lines almost indicated. Turkey 11. *D. bladili* sp. n.
- Sides of pronotum more arcuate, black bristles longer 13
- 13 Pronotum strongly transverse. Elytral pubescence with numerous shorter bristles (Fig. 2) 2. *D. affinis* MORAWITZ
- Pronotum less transverse. Elytral pubescence with relatively sparse, longer bristles (Fig. 6). Tadjikistan 6. *D. hissarus* sp. n.
- 14 Marginal bristles dark and long. Small flavous species with expressively transverse pronotum (Fig. 10). Iran. 10. *D. pallens* sp. n.
- Marginal bristles pale 15
- 15 Upper body surface and/or legs bicolours. Pubescence at most indistinctly dual, i. e. somewhat more erect hairs on elytra may be distinguished. Reliable characters are to be found in phallus only: apex abruptly dilated, spinules in internal sac with no circular bases (Figs 89–98) 14. *D. abeillei* BOURG.
- Body seldom bicolorous (i. e. head partly darkened), legs as coloured as body, mostly testaceous. Phallus different 16

- 16 Antennal joints extraordinarily robust (Fig. 25) 16. *D. simulator* sp. n.
 – Antennal joints of normal shape 17
 17 Body with apparently single pubescence (Fig. 15). Pronotum less transverse
 13. *D. schereri* sp. n.
 – Body also with more erect, longer hairs (Fig. 18). Pronotum more transverse
 15. *D. fallax* sp. n.

1. *Dasytiscus klapperichi* sp. n.

(Figs 1, 33, 55, 56, 111)

This elongate species with long extremities does not resemble any representative of *Dasytiscus* but rather a *Dasytes*-species.

Coloration rufopiceous to piceous; antennal joints 2–3(–6) testaceous, 7–11 gradually infusate to piceous; legs with infusate femora, tibiae and tarsi testaceous; head and anterior pronotal quarter often darker than other upper surface. Integument polished, finely and sparsely punctate, body vestiture dual and bicolorous. Antenna long, joints 6 and 8 scarcely different from neighbouring; head with prominent eyes, punctures sparse, irregular, almost rimmed, intervals lustrous; whitish pubescence decumbent, several unexpressive darker bristles occur at eye inner margin. Pronotum scarcely transverse, base and sides subarcuate, apex straight, disc with very fine and sparse puncturation, intervals almost twice to three-times wider than punctures, strongly polished without microsculpture; submarginal lines sinuate and very fine; lateral areas finely rugose; side margins irregularly but distinctly denticulate; pale decumbent pubescence arranged towards median longitudinal line and towards a point near base; black erect bristles numerous. Elytra elongate, tips rounded respectively; puncturation not very coarse, punctures shallow, nearly as wide as intervals which are subconvex with network microsculpture; fine, nearly decumbent pubescence has intermixed stouter suberect hairs of the same colour.

♂ (Fig. 1). Much more slender, antenna longer with more robust joints. Pronotum scarcely transverse, rather quadrate, sides subarcuate. Legs stouter. Pygidium with strongly converging sides, apex shallowly emarginate. Sternum VII briefly tapered medioapically. Tegmen (Fig. 33) strongly elongate, slightly constricted in middle. Slender phallus in dorsal view (Fig. 55) gradually tapering apex, tip obtuse; in side view (Fig. 56) incurved and emarginate dorsally near apex; internal sac without distinctive structure. Length = 1.83–2.04 mm; Width = 0.64–0.72 mm.

♀. Broader, more dilated posteriorly; antenna with smaller joints. Pronotum more transverse, sides more arcuate. Legs relatively shorter and more slender. Pygidium and sternum VII as in male. Vagina expressively long, its cranial portion produced unilaterally, seminal duct membranous, spermatheca very long (Fig. 111). Length = 2.08–2.26 mm; Width = 0.83–0.96 mm.

Distribution: Afghanistan (Badakshan)

Types.

Holotype, ♂ (NHMB) and 24 paratypes (14 NHMB, 10 KMB): „Faizabad, 1450 m, 2.7.53, Badakshan, Afgh., J. KLAPPERICH“. – 12 paratypes (NHMB): „J. KLAPPERICH, Schiva, Hochsteppe, 2800 m, 12.7.53, NO Afghanistan“.

Derivatio nominis: the species is named to the memory of its collector, Mr J. KLAPPERICH.

2. *Dasytiscus affinis* MORAWITZ, 1861

(Figs 2, 34, 57–62, 112)

Dasytiscus affinis MORAWITZ, 1861: 318; BOURGEOIS, 1885: 255, 259; SCHILSKY, 1896: I, 61; MAJER, 1987: 744, 834 (Figs 150–152).

Dasytiscus graminicola KIESENWETTER, 1859: 180, Tab. 2, Fig. 12 (partim)

Dasytiscus rotundicollis REITTER 1885: 243 syn. n.; SCHILSKY, 1896: I, 62

Very closely related to *D. rufitarsis* (LUCAS), but *D. affinis* is mostly larger; pronotum more strongly convex, transverse and arcuate at sides; submarginal lines (if visible) never so distinct as in *D. rufitarsis*.

Coloration as in *D. rufitarsis*. Head with strongly convex eyes, pubescence as in that species, antennal joints not very different from those in *D. rufitarsis*. Pronotum distinctly transverse, strongly convex, sides and base jointly rounded, pronotum appears transversely oval; submarginal lines (if ever visible) never so distinct as in *D. rufitarsis*, lateral areas below them flatly rugose, side margins with tiny denticles being never so expressive as in *D. rufitarsis*; pubescence as in *D. rufitarsis*; pubescence as in the latter species. Elytral tips slightly rounded respectively, punctures much coarser here than on pronotum, as wide as intervals which are convex but mostly without distinct microsculpture and therefore lustrous; pubescence as in *D. rufitarsis*.

♂ (Fig. 2). Mostly smaller and more slender; pronotum less transverse. Pygidium, sterna VII, VIII, and spicular fork as in *D. rufitarsis*. Tegmen (Fig. 34) more constricted in middle. Phallus without distinctive structure of internal sac; in dorsal view (Fig. 57) with almost sinuate sides; in side view (Figs 58–62) with more robust body and less dilated apex which is rather arcuate than truncate. Length = 1.74–2.27 mm; Width = 0.69–0.87 mm.

♀. Larger, dilated posteriorly; pronotum more transverse. Pygidium, sterna VII and VIII as in *D. rufitarsis*. Vagina (Fig. 112) cranially without bristles on innerside; seminal duct short and membranous, spermatheca variable (similarly as in other species) (Figs 114–116). Length = 2.04–2.56 mm; Width = 0.87–1.04 mm.

Distribution: USSR (Azerbaijan, Georgia, Armenia, and complete region along the Black Sea), Greece (with all islands), Albania, Yugoslavia, Bulgaria, and Romania (?).

Type locality: Sarepta [recently Krasnoarmejsk, S Ukraine]. MORAWITZ's types are unaccessible, probably lost.

Material examined about 1500 specimens.

USSR. Novorossiysk, 7. 1910, J. ROUBAL leg. (NMP, KMB, MCM, ZSM). — idem, LGOCKI leg. (IPE). — Krasnoarmejsk [„Sarepta“] (BMNH, IPE, KMB, MUH, ZMB, ZSM). — Caucasus, REITTER leg. (TMB). — Tastalyan, 30.6. 1979, DANILEWSKI leg., (KMB). — Astrakhan (BMNH). — Azerbaijan, 90 km N Baku, Zarat, 500 m, 15.6. 1983, V. KUBAN leg. (KMB) — idem, 8.–13.6.79, V. ŠVIHLA leg. (KMB). — Georgia, Dzhvari (Tbilisi), 26.6. 1978, J. HLADIL leg. (KMB). — Lisie Ozero, 7. 1957, DLABOLA leg. (KMB). — Armenia, Khozrovski forest, 18.6. 1979, V. ŠVIHLA leg. (KMB).

Greece. Athos, SCHATZMAYR leg. (MCM). — Elatia, 9.5. 1979, J. HLADIL leg. (KMB). — Skaramanga, pr. Athen, 30.5. 1939, H. LINDBERG leg. (NHMB). — Parnas, 1.7. 1909, RAMBOUSEK leg. (NMP). — idem, PAGANETTI leg. (NMP). — idem, STAUDINGER leg. (ZMB). — Malakision (NMP). — Corfu [Kerkyra] (ZMB). — Thessaloniki (ZMB, BMNH). — Nauplia (BMNH). — Papington, Epirus, Zagoria, 950 m, 30.–31.7. 1981, B. MALKIN leg. (RC). — 10 km N of Kastoria, Macedonia, 5.8. 1987, R. CONSTANTIN leg. (RC). — Galastisti, Khalkidi, 29.7. 1986, R. CONSTANTIN leg. (RC). — Linaria, Isl. Skyros, V. 1926, HOLTZ leg. (ZMB, KMB). — Lesvos (MUH).

Albania. Kula Lums, 1918, CSIKI leg. (NHMB).

Yugoslavia. Macedonia: Galichitza, 29.6. 85, J. HLADIL leg. (KMB). — Veles, 15.7. 1976, J. HLADIL leg. (KMB). — Okhrid, 14.7. 1976, J. HLADIL leg. (KMB). — Ulcinj, 15.5. 1977, J. HLADIL leg. (KMB). — Dojran, 9.6. 1974, J. HLADIL leg. (KMB). — Ak-Palanka (ZMB). — Skopje (NHMB). — Frushka Gora (NHMB).

Bulgaria. Kresna env., Sandanski env., Melnik, Rila Mts., Krupnik, Vlachy Pirin, Stara Planina (Karlukovo, Vlas), Shipka, Sliven, Slanchev Brjag, Asenovgrad, Varna, Nesebar (all KMB).

Romania (?): „Transsylvania“ (ZMB).

Holotype, ♀, of *Dasytiscus rotundicollis* REITTER (TMB): “Syrien” (REITTER's MS); “*Dasytiscus rotundicollis* m. 1885” / [reverse side]: “= *affinis* MORAWITZ” (greenish label, REITTER's MS).

Remarks. REITTER supposed *D. rotundicollis* synonymous to *D. affinis* although he never published his opinion. Moreover the locality are most probably confused; the specimen has more rounded and more convex pronotum than *D. affinis*, otherwise it is identical with that species.

3. *Dasytiscus impressicollis* REITTER, 1885

(Figs 3, 63–65, 113)

Dasytiscus impressicollis REITTER, 1885: 242, 245; BOURGEOIS, 1885: 255, 258; SCHILSKY, 1896: 1, 64; LIBERTI, 1986: 191, Figs 22, 23; MAJER, in press c: Fig. 65.

The species strongly resembles *D. rufitarsis* but submarginal pronotal lines are very well marked, pronotal puncturation finer.

Coloration as in *D. rufitarsis* but antenna mostly strongly infusate, often piceous; femora, tarsi, apex of tibiae also more infusate. Integument less lustrous than in *D. rufitarsis*, body vestiture dual and bicolorous. Antenna nearly as in *D. rufitarsis*, eyes slightly prominent, pubescence of head as in the latter species. Pronotum transverse, sides subarcuate, punctures on disc composed of nearly rimmed dots; intervals at least as twice broad as punctures, flat and lustrous, submarginal pronotal lines fine but easily seen, lateral areas below them flatly scabrous, side margins with more numerous denticles; pubescence as in *D. rufitarsis*. Tips of elytra rounded respectively, puncturation coarser than in *D. rufitarsis*, intervals rather convex with microsculpture; pubescence as dense as in the latter species but longer intermixed hairs are uneasy to distinguish.

♂ (Fig. 3). Proportionally smaller, parallelsided. Terminalia as in *D. rufitarsis* but phallus in dorsal view (Fig. 63) with nearly parallelsided body and rhomboidal apex; in side view (Figs 64, 65) apex very broadly truncate and produced into a tip ventrally. Length = 1.83–2.03 mm; Width = 0.69–0.74 mm.

♀. Larger, dilated posteriorly. Pygidium and other terminalia as in *D. rufitarsis*. Vagina glabrous on innerside (Fig. 113). Length = 2.08–2.35 mm; Width = 0.83–0.86 mm.

Distribution: Greece (with all islands), Yugoslavia, Albania.

Types (TMB).

Lectotype ♂, 1 ♂ and 4 ♀ paratypes: "Morea, Hagios Wlassis, BRENSKE" (printed, white label with black margin); Lectotype bears in addition: "*D. impressicollis* m. 1885" (REITTERS MS).

Other material. Greece: Ionian, J. WEINKE leg. (KMB). — Sporades, Skopelos, EMGE leg. (KMB). — Veluchi (NMP, KMB). — Pelop., Hagios Wlassis, BRENSKE leg. (KMB NHMB). — Kephallenia, Argostoli (IPE, KMB, MCM, MUH, NHMB). — Kephallenia, 1908, Megalo-Vunó, M. HILF leg. (NMP, KMB). — Corfu [Kerkyra], FORMÁNEK leg. (KMB, NMP). — idem, PAGANETTI leg. (KMB, IPE). —, Corfu Lagune (MCM). — Levkas env., 25.5.–3.6.1932, BEIER leg. (KMB).

Yugoslavia: Ulcinj, 15.5.1977, J. HLADIL leg. (KMB). — Okhrid env., SILBERNAGEL leg. (NMP). — Kotor, 20.6.1935, W. LIEBMANN leg. (IPE).

Albania: Elbasan, MADER leg. (NHMB, KMB).

4. *Dasytiscus rufitarsis* (LUCAS, 1853)

(Figs 4, 26–30, 35–37, 67–69, 110, 117)

Dasytes rufitarsis LUCAS, 1853: 571

Dasytiscus rufitarsis: DUVAL, 1859: 56; BOURGEOIS, 1885: 255, 259; SCHILSKY, 1896: 1, 63; MAJER, 1987: 744, 856 (Fig. 405); MAJER, in press c: Figs 60–62, 66–73.

Dasytiscus graminicola KIESENWETTER, 1859: 180, tab. 2, Fig. 12 (partim).

Small species similar to *D. affinis* and *D. impressicollis*, but submarginal pronotal lines weakly indicated, i. e. neither absent nor distinctive.

Coloration piceous to black, upper surface lustrous, with greenish reflexes; extremities testaceous to rufescent, tarsi seldom (femora mostly) infusate; antenna with black scape, joints gradually infusate from joints 3–4, terminal ones piceous to black; palps piceous, mostly with lightened tips. Integument densely and finely punctate, not very lustrous, body vestiture dual and bicolorous. Antennal

joints 6 and 8 expressively smaller than adjoining, 9 and 10 feebly transverse; head with moderately prominent eyes, pubescence fine, decumbent; 1–3 bristles mostly present at inner eye margin. Pronotum slightly transverse, sides strongly arcuate but rather converging forwards, puncturation of disc rather shallow, fine, intervals about as twice as broad as diameter of punctures; submarginal lines only indicated but nearly always well visible, lateral areas below them rugose, side margins with several large denticles; pubescence dual: (a) decumbent, light, fine hairs arranged towards a point near base; (b) altogether about 20 black stout bristles occur on lateral areas. Elytra with subtruncate apex. puncturation distinctly coarser than on pronotum; intervals about as broad as puncture diameters, convex, with microsculpture, therefore scarcely lustrous; pubescence dual: (a) fine short hairs not quite decumbent; (b) also light, longer, semi-erect hairs subseriatly admixed; marginal bristles are stouter and longer but not erect, namely at basal portion on humeri where these are often darkened.

♂ (Fig. 4). Smaller, parallelsided; antenna stouter. Pygidium (Fig. 26) semicircular with subtruncate apex. Sternum VII (Fig. 28) twice emarginate at apex, VIII (Fig. 29) narrowly crescent and constricted in middle. Spicular fork (Fig. 30) nearly trifid. Tegmen (Figs 35–37) slender. Phallus without distinctive structure of internal sac; in dorsal view (Fig. 66) rather parallelsided, apex emarginate; in side view (Figs 67–69) with slightly sinuate (but rather straight) body, distal portion dilated and truncate. Length = 1.56–1.90 mm; Width = 0.54–0.66 mm.

♀. Larger, distinctly dilated posteriorly; antenna more slender. Pygidium (Fig. 27) transverse, trapeziform, basal corners short, incurved. Sternum VII very briefly tapered medioapically. Ovipositor as figured (Fig. 110). Vagina cranially setose on innerside (Fig. 117). Length = 2.00–2.22 mm; Width = 0.74–0.83 mm.

Distribution: Greece, Crete, Rhodes, Dalmatia.

Type locality: Crete. Type material was not examined as it had been inaccessible, but the species is sufficiently re-defined by subsequent authors.

Material examined (about 400 specimens).

Greece: Parnassos (NHMB, NMP, KMB). – Macedonia, Athos (NHMB, MUH, IPE, KMB). – Athens, Lyciades Hill, 15.6.1975, B. LEVEY leg. (BMNH). – Attika, Amarusi, 29.6.1909, RAMBOUSEK leg. (NMP). – Taygetos, 19.6.1977, J. HLADIL leg. (KMB). – Goynari, 20.6.1977, J. HLADIL leg. (KMB). – idem, Asafigion (KMB). – Hagios Wlassos, BRENSKE leg. (KMB, NHMB).

Crete: Kanea, OERTZEN leg. (IPE). – Rethimon, 19.6.1975, B. LEVEY leg. (BMNH). – Levka Ori, Samari Gorge, 2.6.1981, S. BILÝ leg. (KMB). – idem, 12–16.6.1942, K. ZIMMERMANN leg. (ZMB, KMB). – Knossos, 1934, MAŘAN et ŠTĚPÁNEK leg. (NMP). – idem, 10.6.1981, S. BILÝ leg. (KMB). – Herákleion, 18.6.1925, A. SCHULTZ leg. (ZMB). – Malia, 10.5.1979, R. DANIELSSON leg. (MLU).

Rhodes: 1 km NW Lindos, 19.5.1983, R. DANIELSSON leg. (MLU, KMB).

Yugoslavia: Ins. Korchula, 16.7.1985, J. RŮŽICKÁ leg. (KMB). First reliable record from Yugoslavia.

Remarks. The occurrence of the species in Caucasus given by SCHILSKY (1896) appears to be either local confusion or misdetermination.

5. *Dasytiscus minotaurus* sp. n.

(Figs 5, 38, 39, 70, 71, 118)

Resembling *D. rufitarsis* in most aspects but body relatively shorter and broader, erect elytral pubescence more distinct, pronotum wider; male as well as female copulatory organs quite different.

Coloration piceous to black, upper surface lustrous with greenish or olivaceous tinge; extremities testaceous; femora, apex of pretarsi, scape and antennal joints from 4 gradually infuscate to piceous; terminal antennal joints and palps always piceous with somewhat lightened apices. Integument densely and finely punctate, slightly lustrous, body vestiture dual and bicolorous. Antennal joints 6 and 8 not very expressively smaller than adjoining, head with prominent yeys, pubescence decumbent,

moderately long, 1–2 (–3) bristles present at each inner eye margin. Pronotum distinctly transverse, basal margin arcuate and nearly gradually passing into arcuate sides; anterior margin subarcuate, fine puncturation of disc not very regular, passing sideways into rugose sculpture; puncture diameter as that of intervals, punctures with almost raised margins, submarginal lines rudimental but quite distinct although less distinctive than in *D. impressicollis* REITT.; sides have several obtuse denticles, approximately 12–15 black bristles present at each side; white decumbent pubescence arranged towards a point near base and towards a transverse arcuate prebasal line, this arcuate line seldom distinct up to anterior pronotal margin. Elytral apices almost jointly and broadly rounded, puncturation flat, intervals convex with microsculpture at least at basal half of elytra; pubescence dual, but its two kinds not sharply differentiated: (a) also fundamental pubescence is rather semi-erect (b) the semi-erect one of the same pale colour richer than in *D. rufitarsis*, at humeral portion setae not darkened.

♂ (Fig. 5). Parallelsided. Pygidium, sterna VII and VIII and spicular fork not different from those in *D. rufitarsis*. Tegmen (Figs 38, 39) slender as correlated with body of phallus which is very slender in both dorsal (Fig. 70) and ventral (Fig. 71) views, apex acuminate; internal sac with 3–6 black spinules. Length = 1.73–1.82 mm; Width = 0.69–0.74 mm.

♀. More dilated posteriorly. Distal portion of vagina setose on innerside (Fig. 118). Length = 1.92–2.04 mm; Width = 0.78–0.91 mm.

Distribution: Crete

Types (KMB).

Holotype, ♂: "Creta, 10. 6. 81, Knossos, S. BILÝ leg.". 1 ♂ and 4 ♀ paratypes: "Creta, 2. 6. 81, Lefka Ori, Samari Gorge, S. BILÝ leg".

6. *Dasytiscus bissarus* sp. n.

(Figs 6, 40, 72, 73)

The species is most resembling *D. minimus* (J. SAHLB.) from which it differs in more slender pronotum and unicolorous body surface.

Coloration black (seldom piceous), extremities rufotestaceous or testaceous, femora and scape often darkened; antenna gradually infusate to piceous from joint 5, mouthparts piceous. Pubescence dual and bicolorous. Antennal joints 6–10 moniliate; eyes not prominent, puncturation of head as fine as on pronotum, pubescence decumbent, several reduced black bristles present at inner eye margin. Pronotum at least slightly transverse, sides arcuate, side margins with several blunt, reduced denticles; disc as well as sides very finely punctate; intervals glabrous and polished, several times wider than punctures, decumbent pubescence nearly as in *D. heydeni* REITT., black bristles numerous. Tips of elytra slightly rounded respectively, puncturation of upper surface much coarser than that of pronotum; pubescence whitish but dual: semi-erect setae easy to distinguish; intervals among punctures subconvex with microsculpture.

♂ (Fig. 6). Pronotum more slender, elytra parallelsided, antennal joint 5 more transverse. Pygidium nearly semicircular, apex slightly emarginate. Sternum VII briefly produced medioapically. Spicular fork very fine, nearly as in *D. praecox* (KÜST.). Tegmen (Fig. 40) resembles that in *D. heydeni* REITT. Phallus nearly parallelsided in dorsal view (Fig. 72), in side view (Fig. 73) resembles that of the mentioned species; internal sac with expressive spinules. Length = 1.83–2.04 mm; Width = 0.69–0.74 mm.

♀. Pronotum broader, elytra dilated posteriorly, antennal joint 5 less transverse. Terminalia without specific characters, vagina unarmed on innerside, seminal duct membranous. Length = 1.95–2.26 mm; Width = 0.72–0.82 mm.

Distribution: USSR – Tadzhikistan

Types (KMB).

Holotype ♂, 3 ♂ and 11 ♀ paratypes: "USSR, Tajik., 27.6.83, Hissar Mts., Yavroz p. Dushanbe, B. MALEC leg."

7. *Dasytiscus heydeni* REITTER, 1891

(Figs 7, 41, 74–76, 119)

Dasytiscus heydeni REITTER, 1891: 226 (replacement name for *analis*)

Dasytiscus analis REITTER, 1890: 360; SCHILSKY, 1896: I, 60

Very elongate species with expressive sparse, erect pale hairs on elytra; very variable in coloration (See Fig. 21 A–E).

Legs testaceous; femora, palps, antennal joints 1 and 4–11 infusate or seldom piceous, sterna and pygidium completely or partly testaceous depending on coloration of upper surface. Integument finely punctate, pubescence dual and bicolorous. Antenna with very small, submoniliate joints which are mostly as long as wide; head nearly as punctate as pronotum but rather slightly rugose. Pronotum transverse, base and apex nearly straight, sides strongly arcuate, marginal denticles very obtuse; disc and sides sparsely and finely punctate, puncturation rarely denser, light decumbent pubescence arranged towards a point near centre of pronotum; black bristles relatively rich in number. Elytra strongly elongate; tips very slightly rounded respectively; elytra much more coarsely punctate than pronotum, with dual pubescence: sparse, long, erect pale hairs well differentiated from semi-erect short ones. Sexes uneasy to distinguish habitually.

♂ (Fig. 7). Somewhat more slender. Pronotum less transverse and less arcuate at sides. Pygidium with slightly emarginate apex; sterna VII and VIII without specific characters. Spicular fork with fork proper longer than in *D. praecox* (KÜST.). Tegmen (Fig. 41) strongly dilated posteriorly. Phallus in dorsal view (Figs 75–76) bisinuate; internal sac without distinctive structure. Length = 1.92–2.61 mm; Width = 0.74–1.00 mm.

♀. Somewhat widened posteriorly. Pronotum more transverse and more arcuate at sides. Pygidium nearly semicircular in outline, apex weakly emarginate. Vagina glabrous on innerside, seminal duct membranous. Length = 2.52–2.70 mm; Width = 0.94–1.05 mm.

Distribution: Soviet Central Asia (Kazakhstan, Tadjikistan, Uzbekistan)

Types (TMB).

Holotype, ♀: "Turkestan, Kyndyr.-T." [oasis Kyndyr, 270 km SE Aral Sea, Bukantan hills, Uzbekistan] (printed); "*Dasytiscus analis* m." (REITTER's MS).

Other material.

Uzbekistan, Alatau, Oshskaya oblast, Sokh pr. Fergana, 20.5.1984, B. MALEC leg. (4 KMB). — Uzbek., Zeravshan Mts., 70 km S Samarkand, Takhtakaragh pass, 1600 m, 30.6.–2.7.1983, V. KUBAÑ leg. (3 KMB). — Tajik., Karatag, 916 m, 10.6.1966, J. KRÁL leg. (5 KMB). — Tajik., Vashskij hrebet, 50 km SEE Dushanbe, Nurek, 27.6.1983, V. KUBAÑ leg. (3 KMB). — Djambul, Kazakhstan (1 TMB). — Tajik., Karatag, 1898, HAUSER leg. (1 NHMB). — "Turkestan, Alka-Kul" (1 NHMB). — "Samarkand, Tahupan Ata" (1 NHMB). — "Hissar, Boch, leg. HAUSER" (1 BMNH).

Remarks. REITTER (1891: 226) replaced the name " *analis*" by " *heydeni*" supposing *Dasytiscus analis* being homonymous to GEBLERS (1830) *analis*. Since the GEBLERS species was described in the genus *Dasytes* F. and it belongs in fact in the genus *Danacaeomimus* CHAMP., the change need not have been done. — See also "Appendix" at the end of this paper.

8. *Dasytiscus minimus* (J. SAHLBERG, 1903) comb. n.

(Figs 8, 24, 42, 77, 78)

Dasytes minimus J. SAHLBERG, 1903: 32 (with var. b *verticalis*, c *collaris*, d *infuscatus*, e *aenescens*).

The species resembles in many aspects (e. g. colour patterns) *D. heydeni* REIT., but it is more slender and has less transverse pronotum.

Coloration (Fig. 24) very variable, but testaceous colour (Fig. 24 A, B) distinctly prevails in females; eyes always black; extremities paler than upper surface. Pubescence dual and bicolorous. Antennal joints never transverse, 5–10 rather moniliate; head with slightly prominent eyes, puncturation fine and sparse, intervals glabrous; pubescence fine, decumbent. Pronotum slightly transverse, base and apex rather straight, sides arcuate, submarginal lines absent, lateral areas therefore not differentiated and are as glabrous as disc, side margins with several flat inconspicuous denticles; puncturation very fine and sparse, intervals glabrous and lustrous, much broader than punctures; pubescence dual: (a) fine, pale, decumbent, arranged towards a median longitudinal line and towards a point near base; (b) lateral black bristles few in number (about 10 at each side). Tips of elytra slightly rounded respectively, puncturation much coarser than on pronotum, intervals slightly convex with microsculpture; pubescence single: fine, pale decumbent, several more erect hairs hard to distinguish from decumbent ones.

♂ (Fig. 8). Dark or varicoloured (Fig. 24 C–E), extremities strongly infusate (always?). Pronotum more transverse. Elytra less dilated posteriorly. Pygidium strongly transverse, rather semicircular. Sternum VII straight at apex. Tegmen (Fig. 42) elongate, apex nearly entire. Phallus in dorsal view (Fig. 71) slender and slightly tapered at distal third; in side view (Fig. 72) rectangularly bent; internal sac without distinctive structure. Length = 1.65–1.91 mm; Width = 0.61–0.69 mm.

♀. Unicolorous, testaceous (always?), only eyes and lateral pronotal bristles black, also extremities pale, base of head often infusate. Pronotum less transverse. Elytra more dilated posteriorly. Pygidium semicircular. Vagina unarmed on innerside, seminal duct membranous. Length = 2.35–2.50 mm; Width = 0.89–1.00 mm.

Distribution: Iran (Elborz)

Types (MUH).

Lectotype, ♀: "Transcaspia" (printed); "Ahnger" [collector] (printed); "spec. typ" (printed); "*Dasytes minimus* J. SAHLB." (white label with black margin, SAHLBERG'S MS); "Mus. Zool. H:fors spec. typ. No 831"; "*Dasytes minimus* J. SB." (printed and handwritten, light-green label). — 1 ♀ paralectotype labelled as Lectotype but bears No. 830. The both females are testaceous — see Fig. 22 A.

Other material.

"Transcaspia, Saramskli [Iran, NE Elborz, Western Kopet-Dagh, near Gorgan], F. HAUSER (23 NHMB, 10 KMB).

Remarks. SAHLBERG (1903) gives in his original description plenty material with four colour variations. Only two testaceous females were sent to me, the rest is probably lost.

9. *Dasytiscus flaveolus* REITTER, 1889

(Figs 9, 79, 80)

Dasytiscus flaveolus REITTER, 1889: 257; SCHILSKY, 1896: H, 78; LIBERTI, 1986: 189, Figs 13–16.

The smallest *Dasytiscus* species, easily recognizable by its pale coloration, small size and expressively black eyes and pronotal setae.

Coloration pale, i. e. flavous to rufotestaceous, antenna infusate towards apex; mouthparts rufopiceous, eyes and pronotal bristles black. Integument rather lustrous, densely punctate; pubescence dual and bicolorous. Antennal joints 6–10 transverse; puncturation of head fine and sparse, intervals gla-

brous; pubescence as dual as on pronotum; eyes rather prominent. Pronotum transverse, base and sides arcuate, side margins flatly denticulate, apex straight, disc regularly and moderately punctate, submarginal lines indicated and mostly evident; light decumbent pubescence arranged towards a point at basal third of pronotum; black setae in number 11–13 at each side of pronotum. Elytra have unicolorous pubescence which is dense but double, erect setae not very long but rather rich number; tips of elytra not rounded respectively but sutural angles almost rectangular.

♂ (Fig. 9). Almost parallelsided. Terminalia without specific characters, tegmen mostly as in *D. rufitarsis*. Phallus in dorsal view (Fig. 79) with cut and subarcuate apex; in side view (Fig. 80) bent and widened at apical third; internal sac without distinctive structure. Length = 1.56–1.78 mm; Width = 0.56–0.67 mm.

♀. Slightly dilated posteriorly. Terminalia have no specific characters, vagina unarmed on innerside, seminal duct membranous. Length = 1.65–1.91 mm; Width = 0.61–0.69 mm.

Distribution: Sporades, Rhodes, Turkey (?)

Types (TMB).

Lectotype, ♂: "Rhodes Apollona, v. Oertzen" (printed); "*D. flaveolus* m. 1888" (REITTERS MS). – 1 ♂ paralectotype: "Südl. Sporaden, Symi, v. OERTZEN".

Other material.

Sporades, Symi, OERTZEN leg. (1 KMB, 11 ZMB, 11 IPE). – Rhodes (2 KMB). – Rhodes, Apollona, OERTZEN leg. (7 ZMB). – Sporades, KRÜPER leg. (NHMB, KMB, ZSM).

Turkey: Smyrna, HELF leg. (KMB, ZMB) (probably locality confusion).

10. *Dasytiscus pallens* sp. n.

(Figs. 10, 43, 81, 82, 120)

Small, flavous species with distinctively transverse pronotum; it resembles *D. flaveolus* from which it differs by absence of submarginal lines and expressive black setae on pronotum, pubescence very short at all.

Coloration flavous to rufotestaceous; eyes black, distal half of antenna more or less infusate, mouthparts infusate to piceous. Puncturation fine and dense. Pubescence pale, unicolorous, dual, lateral pronotal hairs scarcely infusate; more erect hairs on pronotum and elytra unexpressive but evident. Antennal joints 6–10 scarcely transverse; head with moderately prominent eyes, pubescence decumbent, some reduced erect hairs hard to see. Pronotum transverse, strongly convex, submarginal lines completely absent, side margins with fine and flat denticles; puncturation of disc dense, punctures about as wide as intervals which are glabrous; decumbent pubescence arranged towards a point at basal third; lateral hairs very reduced, sparse, somewhat darkened but quite unexpressive. Tips of elytra weakly rounded respectively, pubescence of upper surface somewhat less dense than on pronotum, punctures shallower, intervals with microsculpture; pubescence pale, very short, several more erect, almost indistinct hairs intermixed.

♂ (Fig. 10). Parallel sided, smaller. Pygidium transverse. Tegmen (Fig. 43) dilated posteriorly, apical emargination shallow. Phallus in dorsal view (Fig. 81) with rounded apex; in side view (Fig. 82) nearly parallelsided, apex rather incurved than truncate; internal sac without distinctive structure. Length = 1.61–1.91 mm; Width = 0.59–0.72 mm.

♀. More dilated posteriorly. Terminalia without specific characters, but internal copulatory organs of characteristic structure: vagina cranially setose on innerside, laterally constricted and passing into bursa copulatrix (Fig. 120). Length = 1.87–2.28 mm; Width = 0.74–0.89 mm.

Distribution: Iran

Types.

Holotype, ♂ (NHMB), 5 paratypes (3 NHMB, 2 KMB): "Theran, Golhak, Iran, 14. VII. 61, J. KLAPPERICH". – 1 paratype (NMP): "N Iran, Kushk, N. Masiri, 1800 m, 12.6.1973; Loc. no. 237, Exp. Nat. Mus. Praha".

11. *Dasytiscus bladili* sp. n.

(Figs 83, 84, 121)

The species resembles almost *D. rufitarsis* but the latter has distinctively dual pubescence on pronotum; *D. bladili* is more allied to *D. praecox* (KÜST.).

Coloration piceous to blackish (including antenna and mouthparts), only legs testaceous (tarsi infuscate). Integument densely punctate, rather lustrous; pubescence nearly single and unicolorous (pale); only sides of pronotum with unexpressive stouter hairs at side margins. Antenna with submolligate joints, 9 and 10 transverse; eyes big but not very prominent; puncturation of head rather scabrous. Pronotum with subarcuate base, nearly straight sides and quite straight apex, marginal denticles sparse but distinct. Disc mostly densely (seldom rugosely) punctate, puncturation uneven, condensed sideways, passing into lateral rugose areas which are differentiated by more or less indicated submarginal lines; pubescence arranged towards a point nearer base. Elytra have dense puncturation which is much coarser than on pronotum; pubescence single, but somewhat more erect and longer hairs may also be observed; elytral tips very slightly rounded respectively.

♂ (Fig. 11). Pronotum less transverse; elytra parallelsided. Terminalia nearly as in *D. praecox* (KÜST.). Phallus in dorsal view (Fig. 83) incised at apex; in side view (Fig. 84) nearly straight at apex; internal sac with spinules. Length = 2.08 mm; Width = 0.78 mm.

♀. Pronotum more transverse; elytra dilated posteriorly. Terminalia as in *D. praecox* (KÜST.); vagina unarmed on innerside, seminal duct membranous (Fig. 121). Length = 2.30–2.43; Width = 0.86–0.96 mm.

Distribution: Turkey

Types (KMB).

Holotype, ♂, 3 paratypes: "Turcia m. centr., Pozanti, 3.–6.7.1983, J. HLADIL leg." – 1 paratype: idem, Avanos, 7.–10.7.1983.

Derivatio nominis: the species is named to the memory of my friend Jiří HLADIL, who collected the type material.

12. *Dasytiscus praecox* (KÜSTER, 1851)

(Figs 12–14, 31, 46, 85, 86)

Dasytes praecox KÜSTER, 1851: 57

Dasytiscus praecox: KIESENWETTER, 1863: 625, note 2; BAUDI, 1873: 320; REITTER, 1885: 241; BOURGEOIS, 1885: 255, 260

Dasytiscus (*Dasytidius*) *praecox*: SCHILSKY, 1896: N, 82

Relatively large, light species with black eyes, single pubescence, and obliquely truncate elytral tips (Figs 12, 14).

Coloration pale, flavous to rufotestaceous, very rarely even more infuscate; eyes expressively black, mouthparts piceous, antenna (and often also tarsi) infuscate (rarely piceous) gradually from joint 4. Integument densely and not very finely punctate, semi-mat, body vestiture single and unicolorous. Antenna with joints 6 and 8 distinctly smaller than adjoining, none of them transverse but rather submolligate; head with eyes not protruding from head outline; pubescence decumbent, moderately long;

puncturation as on pronotum. Pronotum (Figs 12, 13) rather quadrate than transverse, base and sides subarcuate; side margins flatly, not densely but distinctly denticulate; puncturation of disc distinctive, moderately dense, intervals mostly glabrous, wider than puncture diameters; neither submarginal lines nor lateral areas differentiated; pubescence single, hairs arranged towards a point near base. Elytra have tips truncate on innerside (Figs 12, 14); puncturation coarser than on pronotum, intervals more convex with distinct microsculpture; pubescence moderately long, fine and decumbent.

♂ (Fig. 12). Not dilated posteriorly, pronotum less transverse, sides less rounded, tips of elytra distinctively truncate on innerside. Pygidium transversely oblong. Sternum VII subarcuate at apex. Spicular fork (Fig. 31) with abbreviate fork proper. Tegmen constricted in middle (Fig. 46). Phallus in dorsal view (Fig. 85) angulate at posterior third; in side view (Fig. 86) with arcuate apex. Internal sac without distinctive structure. Length = 1.89–2.27 mm; Width = 0.65–0.78 mm.

♀. Widened posteriorly; pronotum more transverse, sides more rounded, elytral tips (Fig. 14) less truncate on innerside, truncation seldom inconspicuous. Pygidium nearly semicircular, other terminalia without specific characters. Vagina unarmed, seminal duct membranous. Length = 2.13–2.35 mm; Width = 0.85–0.87 mm.

Distribution: Turkey, Greece(?)

Type locality: Turkey, Smyrna (leg. HELF). Type material unaccessible, most probably lost.

Examined material.

Turkey: Bürücek, Toros, 29.–31.7.1947, Exp. N. Mus. ČSR (18 NMP, 5 KMB). – Beynam, 28.6.1947, Exp. N. Mus. ČSR (18 NMP, 3 KMB). – Smyrna, KRÜPER, leg. (1 KMB, 4 NMP, 9 ZMB, 7 IPE). – Adana (2 TMB, 2 IPE, 1 MCM).

Greece: "Graecia" (1 TMB). – "Parnas" (1 TMB) (most likely locality confusion).

Remarks. Distribution given by PIC (1937) as "Syrien, Cypern" most likely refers to *D. fallax* sp. n. or *D. subtilis* REITT. The species *Dasytiscus puberulus* BOURGEOIS, 1885 is synonymous to *D. subtilis* REITTER, 1885 (now *Haplothrix*). The latter has priority since *D. subtilis* REITT. is already mentioned in BOURGEOIS' work (1885). Types of the both were studied.

13. *Dasytiscus schereri* sp. n.

(Figs 15, 44, 45, 87, 88, 122)

Species resembling *D. abeillei* with which can easily be confused but *D. schereri* has larger body; pronotal sides converging forwards to a less degree and somewhat less arcuate than in *D. abeillei*.

Coloration testaceous to rufotestaceous, seldom rufopiceous (holotype); antenna infusate or piceous from joint 5, eyes black; mouthparts strongly infusate to piceous. Puncturation fine and dense; pubescence single, unicolorous. Antenna submoniliate from joint 6, head as punctate as pronotum, pubescence short, decumbent, eyes slightly prominent. Pronotum scarcely transverse, marginal denticles regular and fine; pubescence arranged towards a point at posterior pronotal third, marginal hairs not expressive; punctures moderately dense, less wide than intervals which are flat, glabrous, or with fine microsculpture. Elytra jointly rounded at apex, tips slightly rounded respectively, puncturation coarser than on pronotum, intervals convex, with microsculpture; pubescence reclinate, more erect hairs practically unobservable.

♂ (Fig. 15). Parallelsided, pronotum subarcuate at sides, more transverse. Pygidium nearly semicircular, other terminalia as in other species; tegmen (Figs 44, 45) constricted in middle. Phallus in dorsal view (Fig. 87) slightly bent at apical third, apex lobate ventrally: internal sac with distinctive spines which are those as figured, or, in addition, elongate spinules are present. Length = 1.91–2.10 mm; Width = 0.74–0.82 mm.

♀. Dilated posteriorly, pronotum rather converging forwards, sides straight. Pygidium transverse, other terminalia without specific characters. Vagina unarmed on innerside, seminal duct membranous (sclerotized in *D. abeillei*) (Fig. 122). Length = 2.17–2.41 mm; Width = 0.88–0.94 mm.

Distribution: Israel, Jordan

Types.

Holotype, ♂ (ZSM), 1 ♂ paratype (ZSM): “Tibériade [Tevarya, Israel] 30.5.81 ABLEF”; “*Dasysticus* [sic!] *hebraicus*” (not ABELLES MS!). – 5 paratypes (3NHMB, 2KMB): “Jordan, 30.4.57, S. & J. KLAPPERICH; Zerkatal b. Romana, O. Jordan”. – 1 paratype (NHMB): “Kubebe, 600 m, Jordan, 13.6.1958, S. & J. KLAPPERICH, b. Jerusalem”. – 1 paratype (NHMB): 800 m, 6.6.58, Amman, Jordan, S. & J. KLAPPERICH”. – 2 paratypes (NHMB): “Fushes, 1000 m, 4.6.56, N. Amman, Jordan, J. & S. KLAPPERICH”.

Derivatio nominis: the species is dedicated to Dr. G. SCHERER of Zoologisches Staatssammlung, Munich.

14. *Dasysticus abeillei* (BOURGEOIS, 1885)

(Figs 16, 17, 32, 47–51, 89–98, 123)

Dasysticus Abeillei BOURGEOIS, 1885: 255, 261

Dasysticus abeillei: MAJER, in press c: Fig. 64

Dasysticus (Dasytidius) abeillei: SCHILSKY, 1896: 83 (with var. *concolor*)

Dasysticus hebraicus: REITTER, 1885: 241, 244

Extremely variable species with short, fine, decumbent pubescence, or it is sometimes semi-erect but never clearly dual. It differs from *D. schereri* sp. n. in smaller size, different shape of phallus and structure of internal sac (see Figs 89–98).

Coloration light (fuscous to cinereous); head and/or anterior pronotal margin mostly darker; rarely upper body surface completely piceous; antennae are often the darkest bodypart but they can rarely have also lightened bases; mouthparts mostly as coloured as head; legs mostly pale, femora often darker, sometimes (e. g. in holotype) pronotum is rufous, head and elytra piceous. Integument densely and finely punctate. Antenna long, with submoniliate joints, 6 and 8 smaller than adjoining; head as punctate as pronotum. Pronotum converging anteriorly (Fig. 16) or subarcuate at sides, quite exceptionally with indicated submarginal lines (Fig. 17); marginal denticles small but distinctive, moderately dense; puncturation of disc dense and regular; pubescence mostly arranged towards a point near base. Tips of elytra rounded respectively; marginal fringe absent; puncturation somewhat coarser than on pronotum.

♂ (Figs 16, 17). Usually smaller and more parallel, extremities longer and stouter, especially antenna, eyes more prominent. Pygidium transverse, rather trapeziform. Sternum VII straight at apex. Tegmen (Figs 47–51) as figured. Phallus in dorsal view (Figs 89, 91, 93, 97) with attenuate apex; in side view (Figs 90, 92, 94, 95, 96, 98) bent in middle and abruptly widened at apex; internal sac with distinctive numerous (about 8–20) black spines. Length = 1.83–2.00 mm; Width = 0.69–0.74 mm.

♀. Larger and widened posteriorly, extremities shorter and more slender, eyes less prominent. Pygidium transverse, apex shallowly emarginate, Seminal duct sclerotized, nearly spiral; vagina glabrous on innerside (Fig. 105). Length = 2.17–2.16 mm; Width = 0.86–1.00 mm.

Distribution: Israel, Jordan

Type material.

Holotype, ♂ (MHNP): “TBD” (green, printed), [= Tibériade, i. e. Tevarya, Israel]; “type” (BOURGEOIS’MS); “*Dasysticus Abeillei* BOURG.” (BOURGEOIS’MS).

Other material.

Jordan: Wadi Sir, Amman, 600 m, 1.6.1956, S. & J. KLAPPERICH leg. (7 NHMB, 4 KMB). — idem, 9.5.1964 (7 NHMB, 3 KMB). — idem, Wadi Ief Kef, 5.3.1965 (3 NHMB). — Wadi el Kelt, 1.6.1966, J. & S. KLAPPERICH leg. (2 RC). — Arda Road, 10.5.1957, S. & J. KLAPPERICH leg. (2 RC). — Dehbeen pr. Jerash, 6.5.1966, S. & J. KLAPPERICH leg. (7 RC). — Jericho [Eriha Naur] (4 KMB, 8 MCM, 2 MUH, 2 ZMB).

Israel: Jerusalem, 11.1929, F. S. BODENHEIMER leg. (1 BMNH). — Wadi Arugod, Ein Gedi, 22.3.1963, W. WITTMER leg. (3 NHMB). — Tevarya, 7.5.1933, W. EICHLER leg. (1 IZW).

Remarks. The species is polymorphous, with an expressive clinal variability, but no separate species are described since intercalary forms do exist. The phallus (its shape and structure of the internal sac) does not display different structure corresponding with the external characters in the morphs.

15. *Dasytiscus fallax* sp. n.

(Figs 18, 52, 99–101, 124)

Very similar in coloration and shape to *D. praecox* from which differs in simply rounded elytral tips and presence of distinct spinules in internal sac of phallus.

Subcylindrical in shape; coloration testaceous to rufotestaceous, head sometimes darkened at basal portion or completely, if so, then also pronotum and elytra more rufescent; mouthparts piceous, antenna infusate at distal portion to completely piceous; tarsi more or less infusate. Integument lustrous, finely punctate; pubescence pale, seldom infusate at pronotal margins; on elytra apparently dual, the both very fine; short and longer hairs subdecumbent to semi-erect, sometimes uneasy to distinguish one from another. Head with no prominent eyes, surface densely and finely punctate, with microsculpture; antenna long and slender, joints submoniliform, 6 and 8 slightly smaller than adjoining. Pronotum slightly transverse, base and apex straight, sides more or less arcuate, side margins more or less regularly denticulate; upper surface densely punctate; intervals with inconspicuous microsculpture, scarcely wider than punctures. Elytra with shallow punctures being coarser than on pronotum, intervals subconvex with distinct microsculpture; side margins finely bordered, sutural angles weakly rounded.

♂ (Fig. 18). Parallel sided, eyes more prominent, extremities longer, antennal joints more moniliform. Pygidium semicircular in outline, emarginate at apex. Sternum VII subarcuate at hind margin. Tegmen as figured (Fig. 52). Phallus (Figs 99–101) bent near middle, gradually widening towards apex; internal sac with numerous, distinctive, black, spinules. Length = 2.41–2.59 mm; Width = 0.82–0.94 mm.

♀. Widened posteriorly, eyes less prominent, extremities more slender and shorter, antennal joints rather more transverse. Pygidium subtrapeziform in outline, apex weakly emarginate. Seminal duct weakly sclerotized (Fig. 124). Length = 2.59–3.29 mm; Width = 1.00–1.18 mm.

Distribution: Israel, Jordan

Types.

Holotype, ♂ (KMB), 5 paratypes (KMB): "Tamagayya, b. Ramallah, Jordan, 4.6.1958, S. & J. KLAPPERICH". — 1 paratype (MHNP): "Jérusalem, Letourneux" [determined as hybridus Reitt.]. — 4 paratypes (MHNP): "TBD" [= Tibériade, i. e. Tevarya, Israel] "*Dasytiscus praecox*". — 2 paratypes (KMB): "Syrien [now Israel] Haifa, Reitter".

16. *Dasytiscus simulator* sp. n.

(Figs 19, 25, 102, 103)

Extremely similar to *D. fallax* from which it differs in the following characters:

Longer hairs on upper surface more distinct, pronotum rather more transverse (Fig. 19); extremities

robust, namely antennal joints (Fig. 25) expressively robust and transverse, unlike to any species of this genus.

♂ (Fig. 19). Parallelsided. Antennal joints very robust (Fig. 25). Pygidium transverse and subtrapeziform. Tegmen as in *D. fallax*. Phallus (Figs 102, 103) subogival on ventral side; internal sac with slender spinules. Length = 2.82 mm; Width = 1.05 mm.

♀. Dilated posteriorly. Extremities somewhat more slender, antennal joints less robust. Pygidium subtrapeziform, apex weakly emarginate. Internal copulatory organs as in *D. fallax*. Length = 3.00 mm; Width = 1.18 mm.

Distribution: Israel

Types (MHNP).

Holotype, ♂: "TBD" [= Tevarya, Israel]; „*Dasytiscus praecox*". — 1 paratype: "Tibériade, ABEILLE d. PERRIN" (ABEILLES MS); "Color. typique" (ABEILLES MS); "*hebraicus* var. *simulator* m." (SCHILSKYS MS).

Remarks. The name "*simulator*" was used by SCHILSKY to designate the different form in the ABEILLES collection, but remained unpublished.

17. *Dasytiscus hebraicus* BOURGEOIS, 1883

(Figs 20, 53, 104–107, 125, 126)

Dasytiscus hebraicus BOURGEOIS, 1883: 53; SCHILSKY, 1896: M, 80

Dasytiscus hybridus REITTER, 1890: 361 (♀)

Dasytiscus hebraicus var. *hybridus*: SCHILSKY, 1896: 80

Dasytiscus subtilis partim: SCHILSKY, 1896: 80 (nec REITTER, 1885: 244)

Species having pronotum arcuate, expressively denticulate and setose at sides; elytra subovate in outline; both winged and wingless formae occur within the species.

Coloration: upper surface rufopiceous, seldom testaceous (holotype), pronotum and head sometimes reddish, legs rufotestaceous or testaceous, femora and antenna more or less infusate; antennae mostly darker than other extremities. Antenna with small (rather round) joints, 6 and 8 smaller than neighbouring; head with slightly prominent eyes, as punctate as pronotum; pale pubescence subdecumbent, not very dense; some reduced bristles somewhat darker and hard to distinguish from pale pubescence. Pronotum not transverse, base and apex subarcuate, sides arcuate, side margins expressively and regularly denticulate; disc with not dense punctures, intervals glabrous, distinctly broader than puncture diameter, pronotal sides as punctate as disc; pale pubescence subreclinate, arranged towards a median longitudinal line; bristles are expressive, mostly black, relatively long and rich in number (20–30 at each side), or these are pale and not prominent, e. g. in holotype. Elytra with more or less reduced humeri, rather subovate in outline, tips rounded respectively; punctures much coarser than on pronotum, intervals weakly convex with microsculpture; pubescence pale, composed of (a) subreclinate fine hairs and (b) semi-erect ones; the two kinds of pubescence are uneasy to distinguish one from another.

♂ (Fig. 20). Antennal joints 9 and 10 almost transverse; elytral outline scarcely subovate. Pygidium semicircular in outline, sterna VII and VIII without specific characters, spicular fork as in *D. praecox*. Tegmen (Fig. 53) in dorsal view constricted in middle. Phallus in dorsal view (Fig. 106) toothed at sides; in side view (Figs 104, 105, 107) gradually widening towards apex; internal sac with distinctive structure composed of numerous small spines having circular bases. Length = 1.68–1.93 mm; Width = 0.59–0.80 mm.

♀. Antennal joints 9 and 10 not transverse; elytral outline almost ovate. Pygidium rather trapeziform, apex briefly incised; vagina strongly elongate, its cranial portion weakly sclerotized, sclerotized seminal duct incurved (Figs 125, 126). Length = 1.78–2.23 mm; Width = 0.72–0.88 mm.

Distribution: Israel

Types (MHNP).

Lectotype, ♂: "Jérusalem [Yerushalayim] LETOURNX." [LETOURNEUX leg.]; "♂"; "*hybridus* REITTER" (BOURGEOIS'MS); "*hebraicus* BOURG. *hybridus* det. REITT. *praecox* BOURG." (Bourgeois'MS). — 1 ♀ paralectotype: "Jerusalem Letx"; "var. c m." (SCHILSKYS MS); "♀" (SCHILSKYS MS). — 1 paralectotype, ♀: "Jerusalem Letournx"; "♀"; "var a m." (SCHILSKYS MS).

Other material.

Israel, Nazerath, 8.5.1933, W. EICHLER leg. (1 NHMB, 2 KMB, 5 IZW). — Haifa-Carmelo, 2.5.1933, A. SCHATZMAYR leg. (1 NHMB, 4 KMB, 8 MCM).

Remarks. The species was previously considered by me to be new and designated as "*eichleri*", whose types are deposited in NHMB and MCM. Similarly also *Dasytiscus hybridus* REITTER, 1885 was designated by me as a good species, since the female holotype (TMB) has indicated submarginal pronotal lines. Now, after receiving the type material from the Paris Museum, it is left as synonymous with *D. hebraicus* BOURG.

SCHILSKY (1896) confused *D. hebraicus* BOURG. with *D. subtilis* REITT. (the latter now belongs in *Haemaphysalis* SCHILSK.) which also caused I was designating all *subtilis* as *hebraicus* till I had the types of *hebraicus* at disposal.

Even though no specimen marked as "type" had been found in the BOURGEOIS' collection, types were designated. BOURGEOIS' species conception ensues from both the expressive structure of the pronotum which is figured and the locality data given ("Jérusalem, Letourneux").

The fact that the both winged and wingless forms occur here is surprising. No intercalary formae have been found; if the wings are present, these are capable of normal flight, if absent, only scale relics occur. The mutual ratio of winged and wingless formae is about 1:3.

18. *Dasytiscus jordanicus* sp. n.

(Figs 21, 22, 54, 108, 109, 127)

Apterous species resembling in some aspects the genus *Amauronion* WESTW. (= *Aphyctus* DUVAL); pronotum and elytra of a very distinctive shape (Figs 21, 22).

Coloration rufopiceous or rufotestaceous, head, mouthparts and distal portion of antenna darker, femora infusate; elytra and/or pronotum with darker dim macula. Pubescence quite decumbent, very fine, single, unicolorous. Antenna with no transverse joints, the terminal one is elongate-oval; head indistinctly punctate to finely rugose, pubescence fine, decumbent; eyes weakly prominent. Pronotum rather elongate, base and apex slightly emarginate, sides strongly arcuate, disc with well defined punctures, intervals as wide as punctures, glabrous, even and lustrous; neither submarginal lines nor lateral areas defined, thus pronotum is evenly convex from disc up to side margins which bear sparse reduced denticles having very abbreviate, pale stouter hairs. Elytra (chiefly in female) have ovate outline and reduced humeri; puncturation as dense as on pronotum but intervals between punctures have network microsculpture, fine pale hairs quite decumbent.

♂ (Fig. 22). More slender; antenna longer. Pygidium rather semicircular in outline. Sternum VII straight at apex. Spicular fork with not very abbreviate fork proper. Tegmen (Fig. 54) constricted in middle, apical emargination nearly shallow. Phallus in dorsal view (Fig. 108) resembles that of *D. abeillei* BOURG., in side view (Fig. 109) distinctively bent, otherwise also resembles that of *D. abeillei* BOURG. Internal sac with numerous spines of two size. Length = 1.61–1.70 mm; Width = 0.54–0.60 mm.

♀. Strongly widened posteriorly, elytra ovoid (Fig. 22); antenna shorter. Pygidium strongly convergent towards apex which is shallowly emarginate. Sternum VII subarcuate at apex. Vagina very

long, seminal duct sclerotized, cucumber-shaped, spermatheca long (Fig. 127). Length = 1.96–2.20 mm; Width = 0.83–0.98 mm.

Distribution: Jordan

Types.

Holotype, ♂ (NHMB), 3 paratypes (2 KMB, 1NHMB): "Schaubak, Jordan, 17.5.68, J. & S. KLAPPERICH".

Appendix

Danacaeomimus analis (GEBLER, 1830) comb. n.

Dasytes analis GEBLER, 1830: 90 (type-locality "Tartaria")

"*Dasytiscus* (n. sp.?) *analis*": BAUDI, 1873: 313 (nec REITTER, 1890: 361)

Dasytiscus (*Dasytidius*) *turkestanicus* SCHILSKY, 1897: 74, syn. n.

Danacaeomimus turkestanicus: MAJER, in press, a

It is evident from either GEBLER's original description or BAUDI's (1873) redescription and comments that *D. analis* GEBLER belongs to *Danacaeomimus* CHAMPION, 1922. SCHILSKY (1896) in his description of *Dasytiscus turkestanicus* gives that he received a single female specimen (also studied by me) from H. v. HEYDEN that had been marked as "*Danacaea analis* GEBLER". I do not know why SCHILSKY did not respect this name, he most likely considered "*Danacaea analis* GEBLER" to be an undescribed species. SCHILSKY only gives that the female specimen does not belong to *Danacea* but to *Dasytiscus* and is easily distinguishable from either *Dasytiscus hauseri* and *D. analis* REITTER (now *heydeni* REITT.).

Nevertheless, I also overlooked this reality in my revision of the tribe Danacaeomimini (MAJER, in press a) supposing *Dasytiscus analis* GEBLER, 1830 identical with *Dasytiscus analis* (now *heydeni*) REITTER, 1890. Regardless the GEBLER's type material has completely been destroyed or lost, both the GEBLER's and BAUDI's descriptions correspond with SCHILSKY's "*Dasytiscus turkestanicus*".

Dasytes analis FISCHER VON WALDHEIM, 1844: 38 (nomen novum for *Dasytes marginatus* FISCHER VON WALDHEIM, 1842: 9 which was supposed preoccupied by *Dasytes marginatus* ULLRICH, an useless name from DEJEAN'S Catalogue; the FISCHER's name need not have been changed) is a younger primary homonym to *Dasytes analis* GEBLER, 1830; it has to be rejected and the name *marginatus* respected as valid again.

See also "Remarks" below the description of *Dasytiscus heydeni* REITTER, 1891.

Acknowledgements

My thanks belong to all who kindly placed the material at my disposal. They are: Dr. E. R. PEACOCK (BMNH), Dr. L. DIECKMANN (IPE), Dr. A. SLIPIŃSKI (IZW), Dr. C. LEONARDI (MCM), Dr. J. J. MENIER (MHNP), Dr. R. DANIELSSON (MLU), Dr. O. BISTRÖM (MUH), Dr. M. BRANCUCCI (NHMB), Dr. J. JELÍNEK (NMP), Dr. F. HIEKE (ZMB), Dr. Z. KASZAB † (TMB), Dr. R. GERSTMEIER (ZSM).

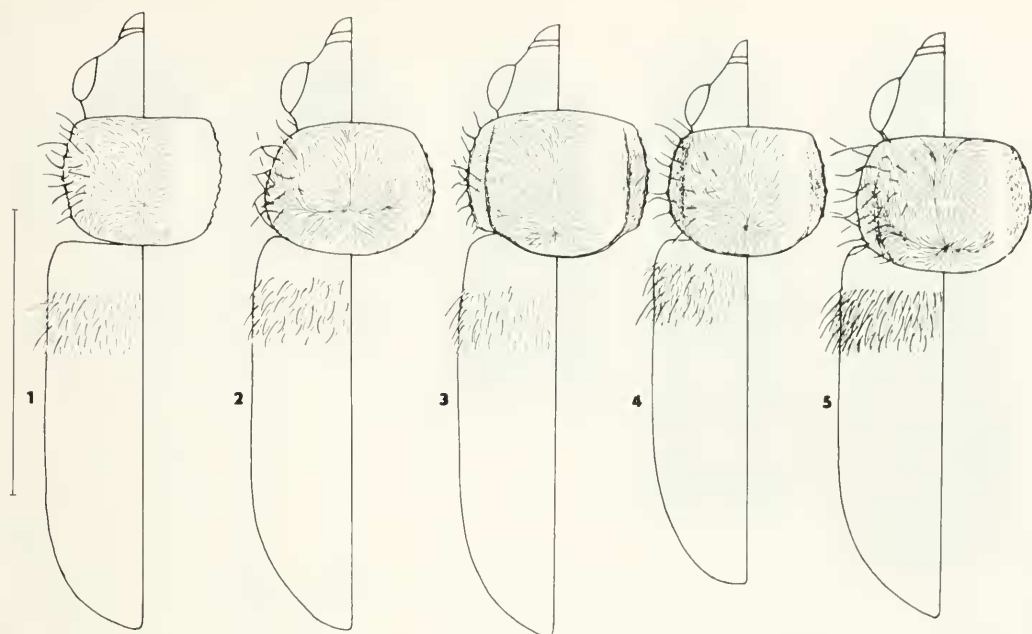
I am greatly obliged to my friend, Dr. R. CONSTANTIN (RC), without whose searching the types in the Paris Museum the paper would never be finished.

Literature

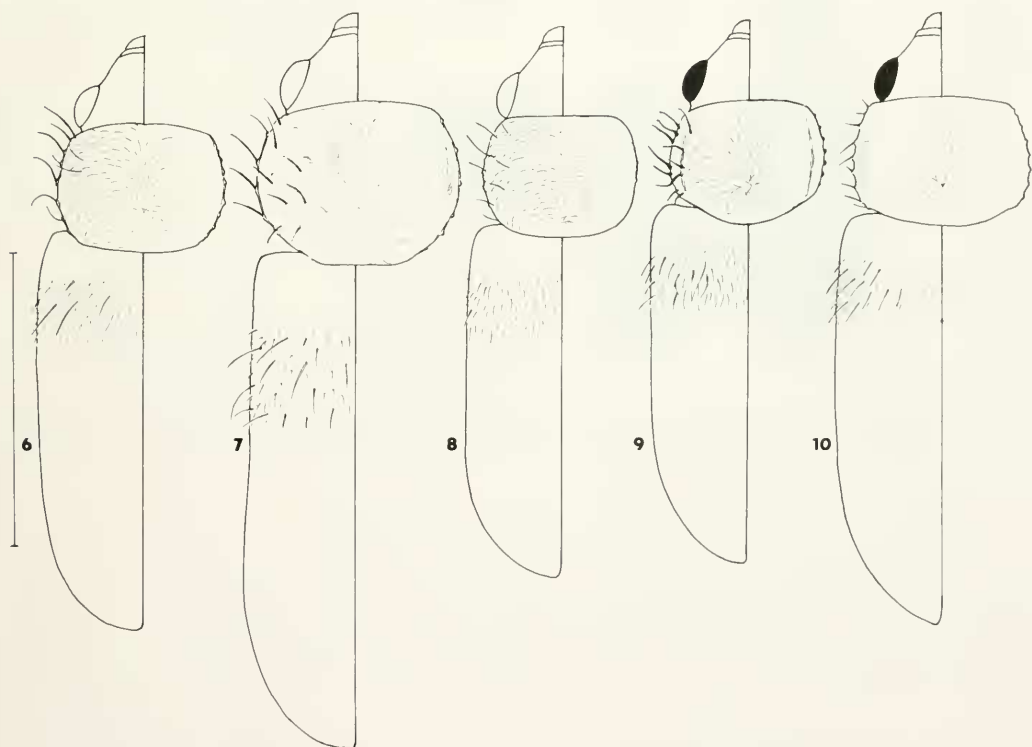
- BAUDI, F. 1873: Europeae et circummediterraneae Faunae Dasytidum et Melyridum Specierum, quae Comes Dejean in suo Catalogo ed. 3^a consignavit, collatio. Pars quinta. — Berlin. ent. Zeitschr. 17, 293–316
- BOURGEOIS, J. 1883: Description d'une espèce nouvelle du genre *Dasytiscus* KIESENW., trouvée en Palestine. — Ann. Soc. Ent. France, Bull. p. LIII–LIV,

- 1885: Remarques sur le genre *Dasytiscus* et descriptions d'espèces nouvelles ou imparfaitement connus. — Ann. Soc. ent. France (6)5, 253–271, tab. 5, fig. 1–4
- DUVAL, J. P. N. C. 1859: Glanures entomologiques. — Bd. 1, 60 pp., 4 tab, Paris (Deyrolle).
- GEBLER, F. A. 1830: Notae et addidamenta ad catalogum Sibiriae occidentalis et confinis Tartariae. — Ledebours Reise 2, 50 pp., Berlin.
- FISCHER VON WALDHEIM, G. 1842: Catalogus Coleopterorum in Siberia orientali a cel. Gregorio Silide Karelin collectorum. 28 pp.
- 1844: Spicilegium Entomographiae Rossicae. — Bull. Moscou 17, 3–144
- KIESENWETTER, E. A. H. 1859: Beiträge zur Käferfauna Griechenlands. V–VI. Melyridae. — Berlin. ent. Zeitschr. 3, 30–34; 160–161; 163–185; 191, tab. II.
- 1863: in ERICHSON et al.: Naturgeschichte der Insekten Deutschlands. — IV. Band, erste Abt., 746 pp., Berlin (Nicolai).
- KÜSTER, H. C. 1851: Die Käfer Europas. 22. Heft. 1–100. — Nürnberg (Bauer & Raspe).
- LIBERTI, G. 1986: Notes on some *Dasytiscus* KIESW. Col., Dasytidae from Greece. — G. it. Ent. 3, 185–193
- LUCAS, P. H. 1853: Essai sur les animaux articulés qui habitent l'île de Crete. — Rev. Mag. Zool. (2)5, 565–576
- MAJER, K. 1987: Comparative morphology and proposed major taxonomy of the family Melyridae (Insecta, Coleoptera). — Pols. pismo ent. 56, 719–859, 433 figs.
- in press, a: A revision of the tribe Danacaeomimini (Coleoptera, Melyridae, Dasytinae). — Dt. entom. Z., N. F.
- in press, b: Generic classification of the tribe Chaetomalachiini (Coleoptera, Melyridae, Dasytinae). — Pols. pismo ent. 58,
- in press, c: The genus *Dasytidius* KIESENWETTER, 1859: species of Turkey and the Balkans (Coleoptera, Melyridae). — Acta ent. bohemoslov.
- MORAWITZ, F. 1861: Einige neue Melyridae. — Bull. Soc. Imp. Nat. Moscou 34, 314–320
- PIC, M. 1937: in JUNK & SCHENKLING: Coleopterorum Catalogus vol. X., pars 155. Dasytidae Dasytinae, 130 pp. — s'Gravenhage.
- REITTER, E. 1885: Übersicht der bekannten *Dasytiscus*-Arten. Ent. Nachr. 11, 241–247
- 1889: Neue Coleopteren aus Europa, den angrenzenden Ländern und Sibirien, mit Bemerkungen über bekannte Arten. — Deutsch. ent. Zeitschr. 1889 (Heft 2), 254–258
- 1890: in L. VON HEYDEN: XIII. Beitrag zur Coleopteren-Fauna von Turkestan. Unter Mitwirkung der Herren REITTER und WEISE. — Deutsch. ent. Zeitschr. 1890 (Heft 2), 351–368
- 1891: Dritter Beitrag zur Coleopteren-Fauna des russischen Reiches. — Wien. ent. Ztg. X (Heft 7), 221–233
- SAHLBERG, J. 1903: Coleoptera mediterranea et rosso-asiatica nova et minus cognita, maxima ex parte itineribus annis 1895–1896 collecta. — Oefv. Fins. Vet.-Soc. Förh. 45 (1902–1903) No. 10, 1–40
- SCHILSKY, J. 1896: Die Käfer Europas. 32. Heft, A–Q, 1–100a. — Nürnberg (Bauer & Raspe).

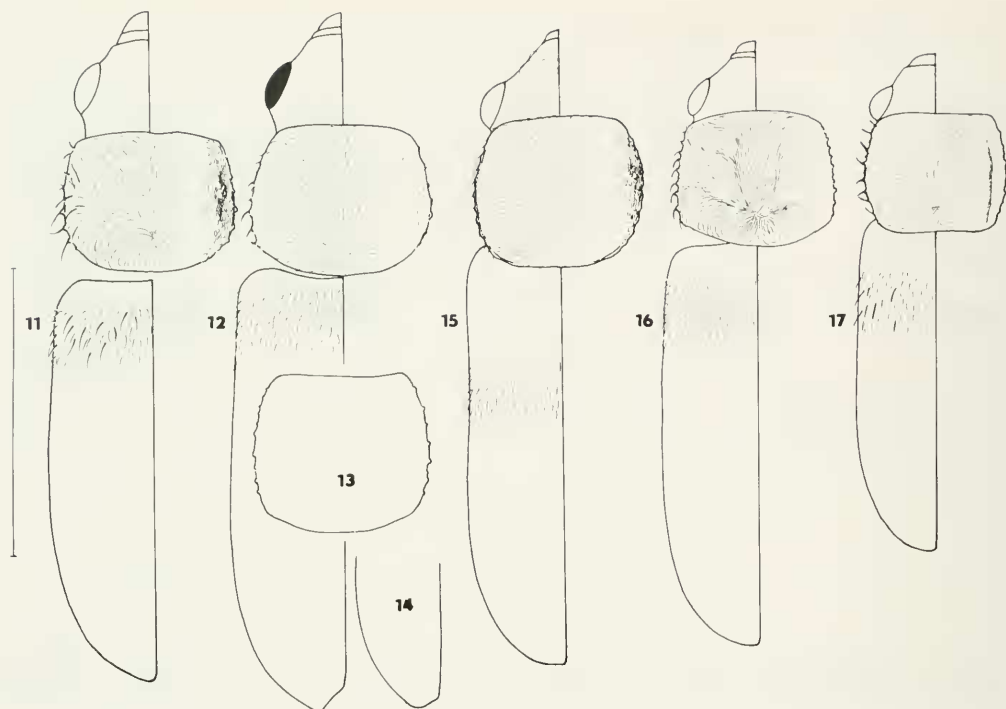
Karel MAJER
University of Agriculture
Faculty of Forestry
Zemědělská 3
61300 Brno
Czechoslovakia



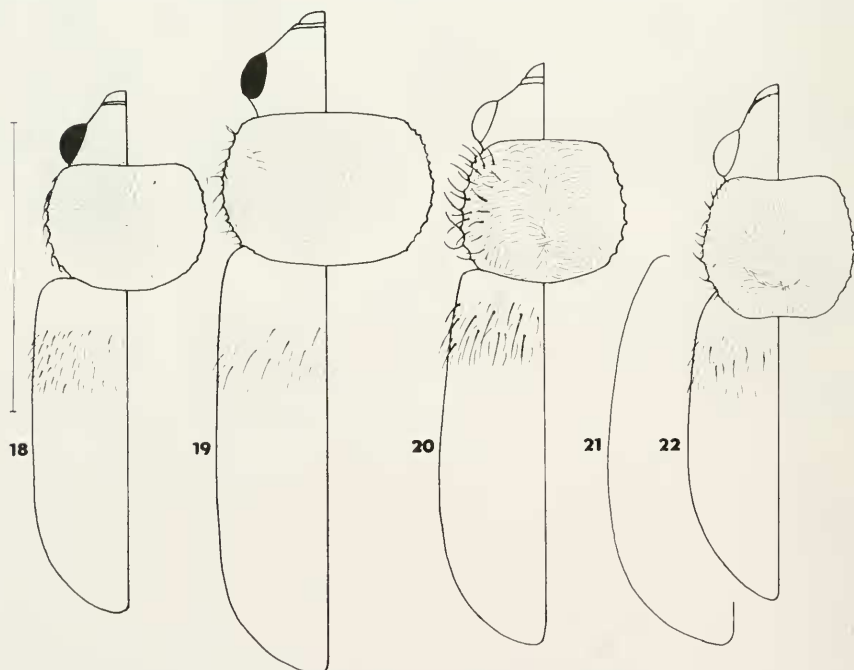
Figs 1-5: body outline, ♂: 1 *Dasytiscus klapperichi* sp. n., 2 *D. affinis* MORAW., 3 *D. impressicollis* REITT., 4 *D. rufitarsis* (LUCAS), 5 *D. minotaurus* sp. n. Scale = 1 mm.



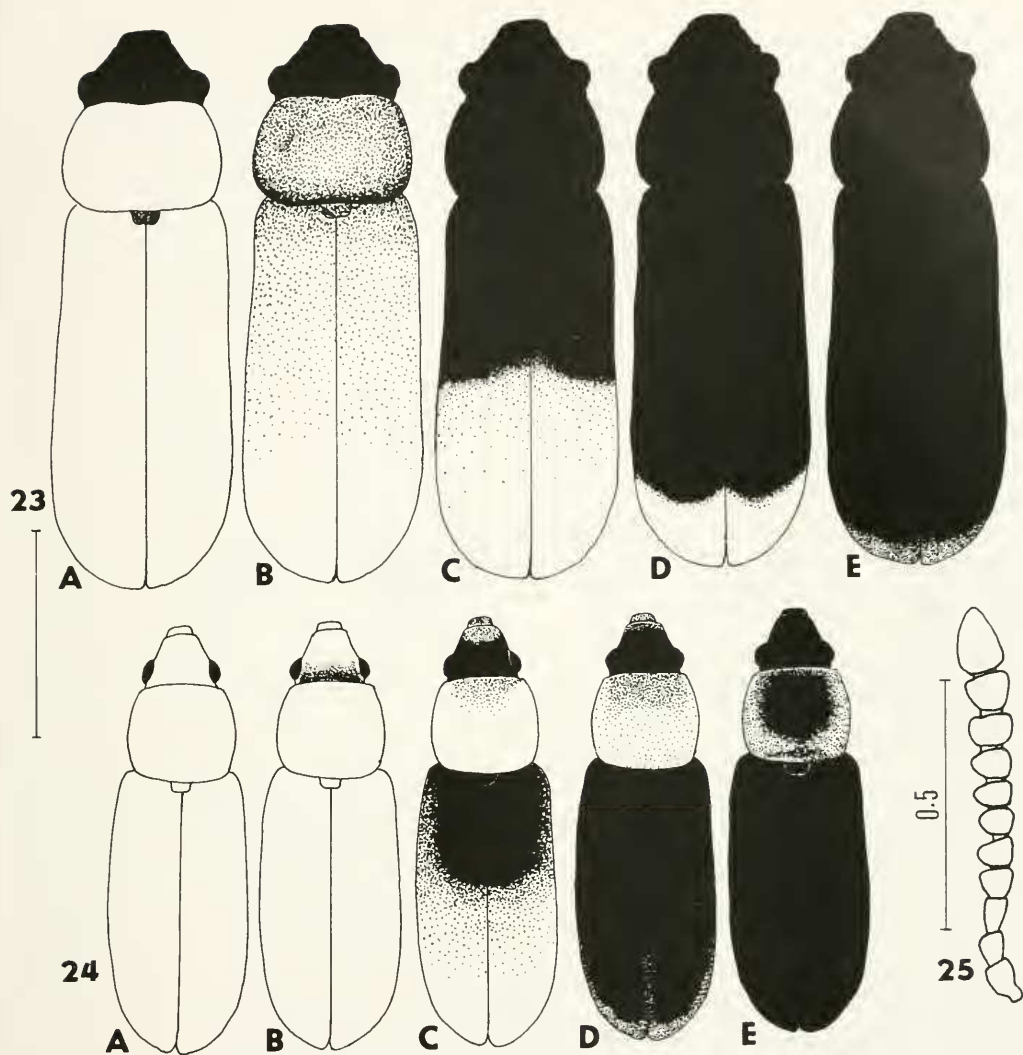
Figs 6-10: body outline, ♂: 6 *Dasytiscus hissarus* sp. n., 7 *D. heydeni* REITT., 8 *D. minimus* (J. SAHLB.), 9 *D. flaveolus* REITT., 10 *D. pallens* sp. n. Scale = 1 mm.



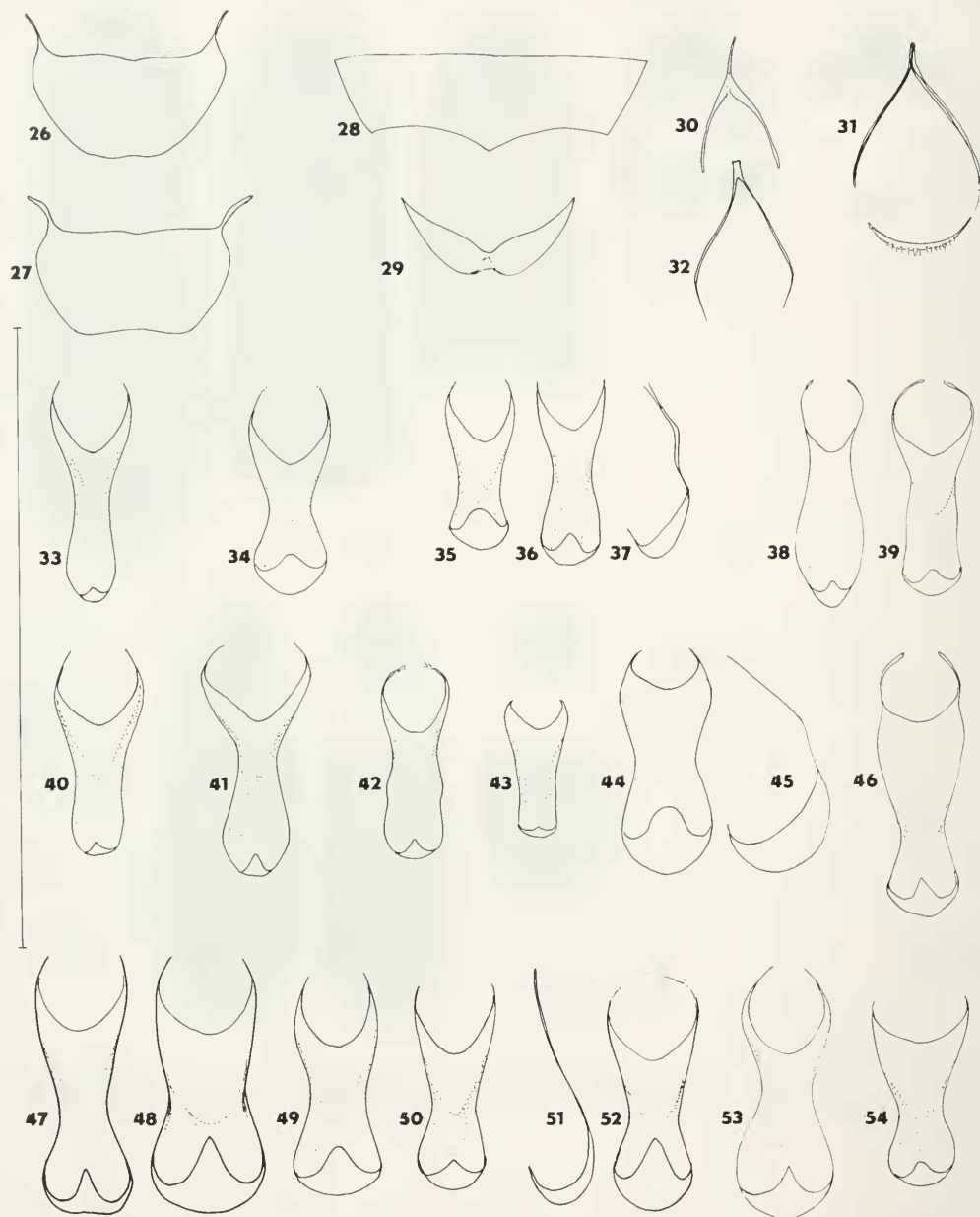
Figs. 11–12, 15–17: body outline, ♂; 13: outline of pronotum, ♂; 14: apex of left elytron, ♀: 11 *Dasytiscus bladii* sp. n., 12–14 *D. praecox* (KÜST.), 15 *D. schereri* sp. n., 16–17 *D. abeillei* BOURG. Scale = 1 mm.



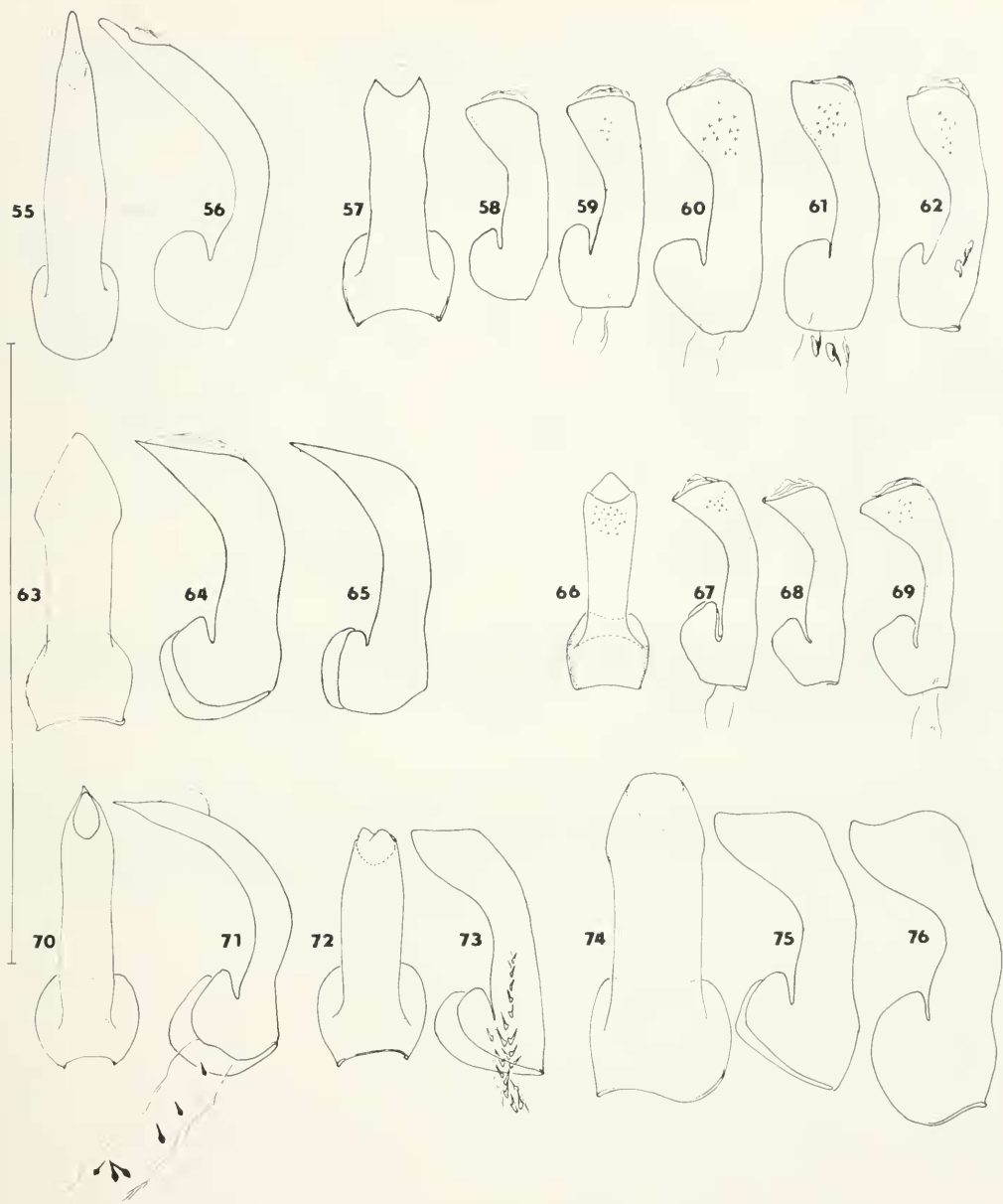
Figs 18–20, 22: body outline, ♂; 21: outline of left elytron, ♀: 18 *Dasytiscus fallax* sp. n., 19 *D. simulator* sp. n., 20 *D. hebraicus* BOURG., 21–22 *D. jordanicus* sp. n. Scale = 1 mm.



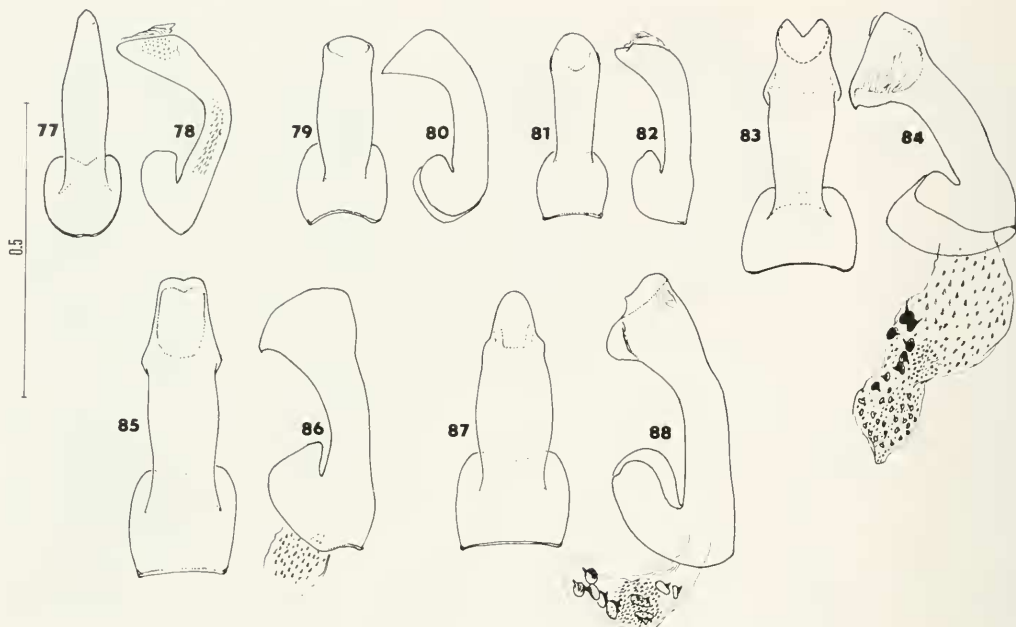
Figs 23–25: 23A–E *Dasytiscus heydeni* REITT., variability of colour patterns, 24 *D. minimus* (J. SAHLB.), same, 25 *D. simulator* sp. n., ♂, antenna. Scale = 1 mm.



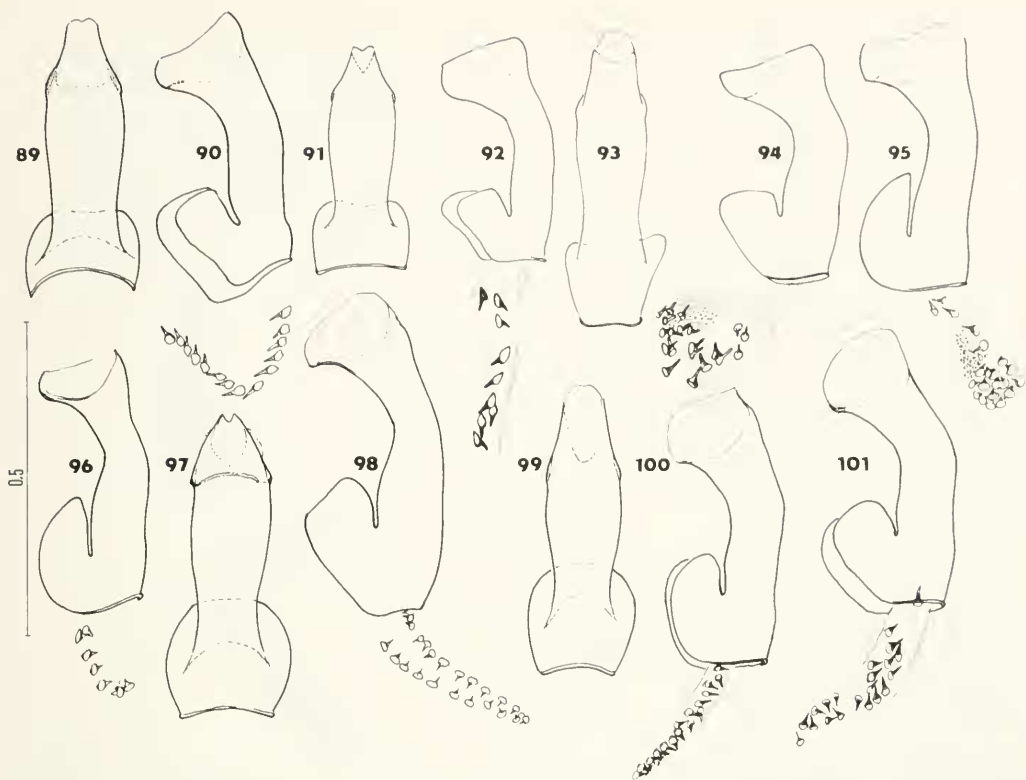
Figs 26–54: 26: male pygidium; 27: female pygidium; 28: male sternum VII; 29: male sternum VIII; 30–32: spicular fork; 33–36, 38–44, 46–50, 52–54: tegmen, dorsal view; 37, 45, 51: same, side view: 26–30, 35–37 *Dasytiscus rufitarsis* (LUCAS), 31, 46 *D. praecox* (KÜST.), 32, 47–51 *D. abeillei* BOURG. (47 holotype), 38–39 *D. minotaurus* sp. n. (38 holotype), 40 *D. hissarus* sp. n., 41 *D. heydeni* REITT., 42 *D. minimus* (J. SAHLB.), 43 *D. pallens* sp. n., 44, 45 *D. schereri* sp. n., 52 *D. fallax* sp. n. (holotype), 53 *D. hebraicus* BOURG., 54 *D. jordanicus* sp. n. Scale = 1 mm.



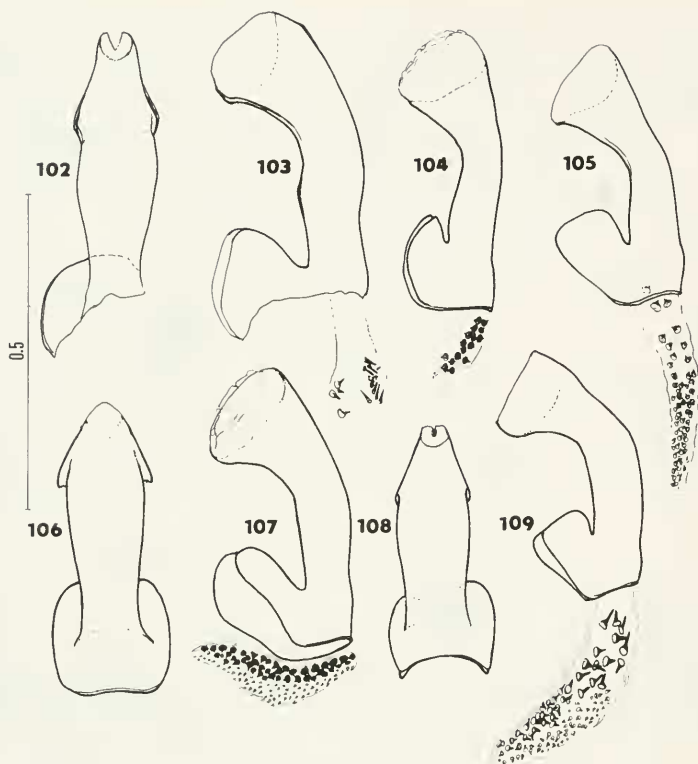
Figs 55–76: phallus (55, 57, 63, 66, 70, 72, 74 dorsal view, 56, 58–62, 64, 65, 67–69, 71, 73, 75–76 side view): 55–56 *Dasytiscus klapperichi* sp. n., 57–62 *D. affinis* MOR. (58 Bulgaria: Kresna, 59 Bulg.: Sandanski, 60 Greece: Elatia, 61 USSR: Krasnoarmejsk, 62 Yugoslavia: Okhrid), 63–65 *D. impressicollis* REITT. (63, 64 Yugoslavia: Ulcinj, 65 Greece: Corfu), 66–69 *D. rufitarsis* (LUCAS) (66–67, 69 Crete, 68 Taygetos), 70, 71 *D. minotaurus* sp. n., 72–73 *D. hissarus* sp. n., 74–76 *D. beydeni* REITT. Scale = 1 mm.



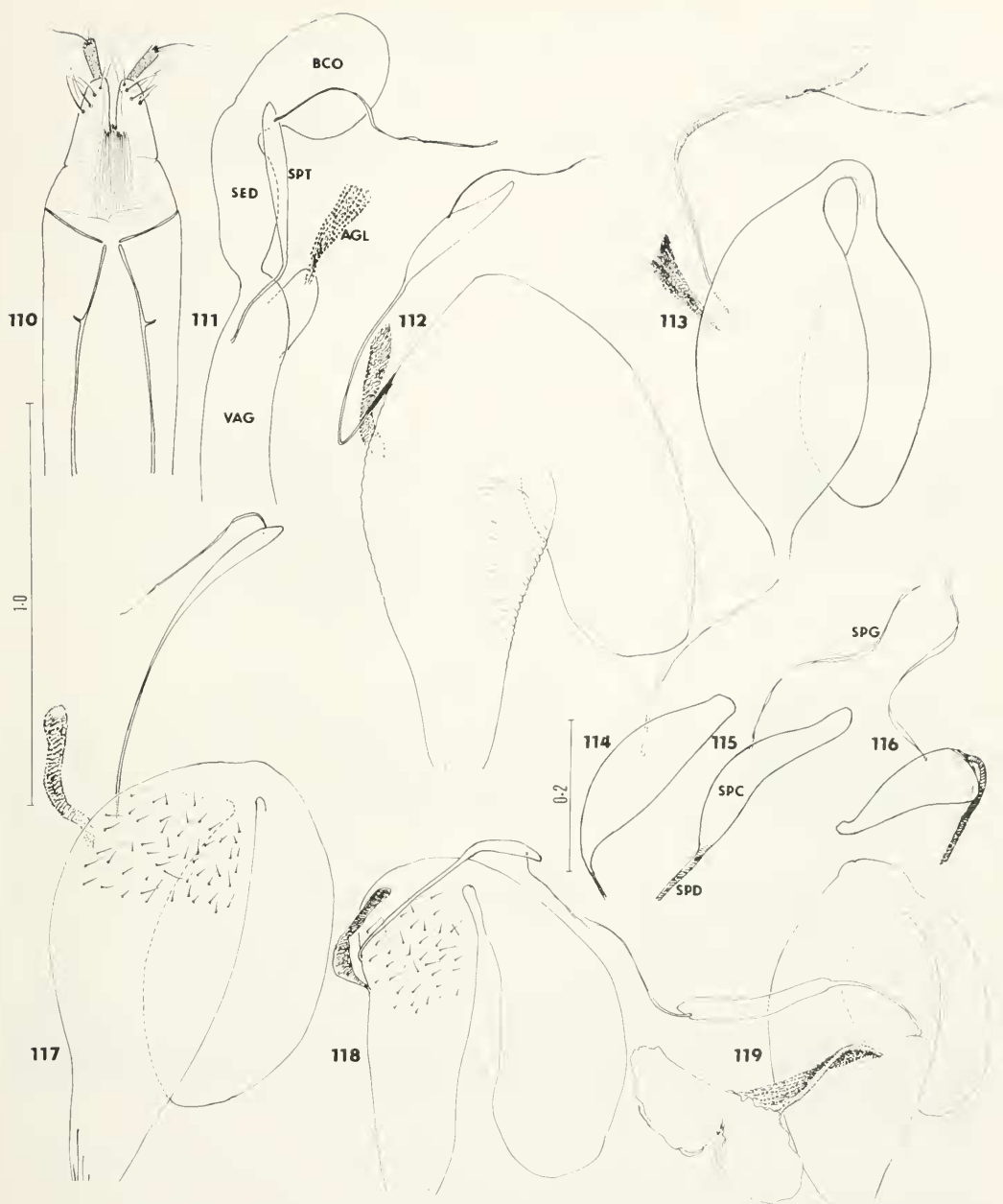
Figs 77–88: phallus (77, 79, 81, 83, 85, 87 dorsal view; 78, 80, 82, 84, 86, 88 side view): 77, 78 *Dasytiscus minimus* (J. SAHLB.), 79, 80 *D. flaveolus* REITT., 81, 82 *D. pallens* sp. n., 83, 84 *D. bladili* sp. n., 85, 86 *D. praecox* (KÜST.), 87, 88 *D. schereri* sp. n. Scale in mm.



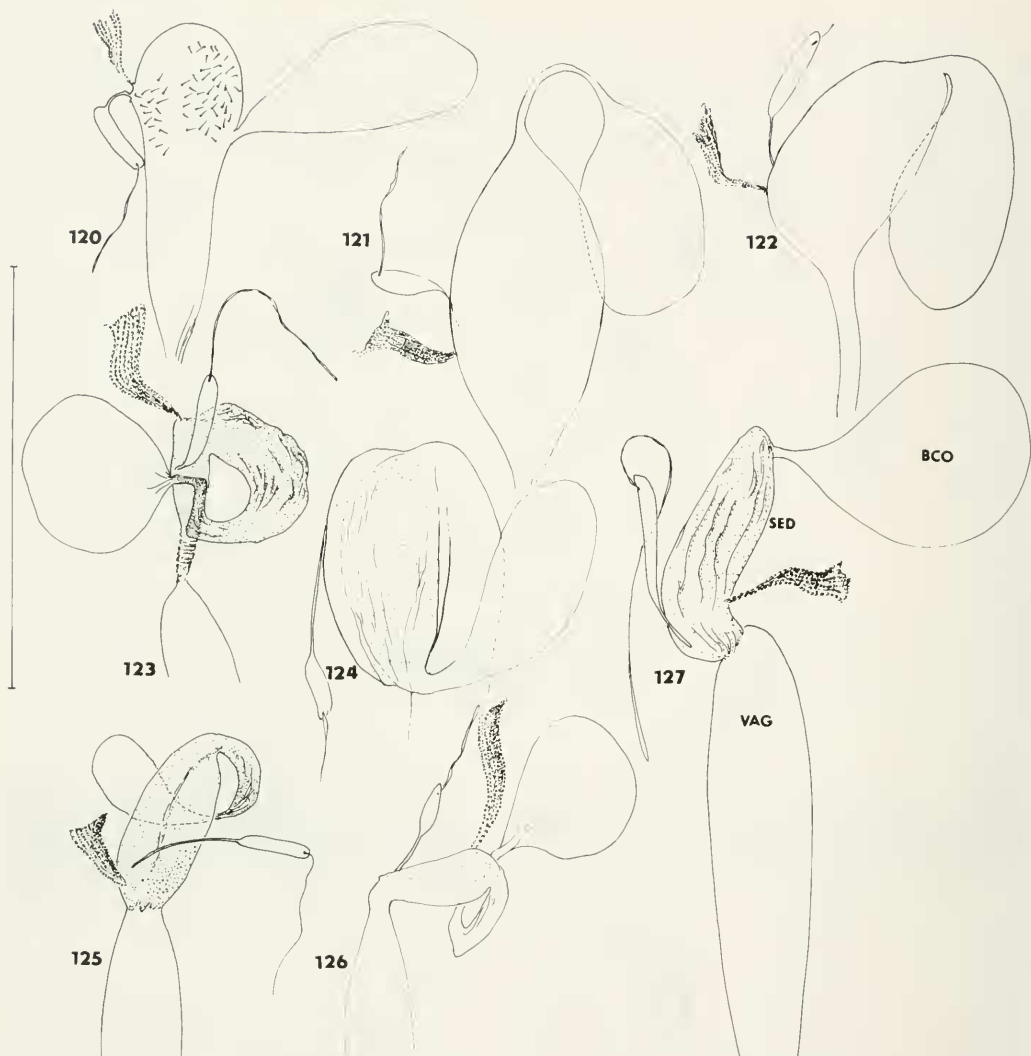
Figs 89–101: phallus (89, 91, 93, 97, 99 dorsal view, 90, 92, 94–96, 98, 100–101 side view); 89–98 *Dasytiscus abeillei* BOURG. (89, 90 holotype; 91, 92 Israel: Haifa- body outline of this specimen on Fig. 17; 92, 93 another specimen from Jordan- body outline of this specimen on Fig. 16; 95, 96 Jordan: Jericho; 97, 98 Jordan: Amman), 99–101 *D. fallax* sp. n. (101 holotype). Scale in mm.



Figs 102—109: phallus (102, 106, 108 dorsal view, 103—105, 107, 109 side view): 102, 103 *D. simulator* sp. n. (holotype), 104—107 *D. hebraicus* BOURG. (104 holotype: apterous; 105 specimen from Haifa: winged; 106, 107 apterous specimen from Haifa), 108, 109 *D. jordanicus* sp. n. Scale in mm.



Figs 110–119: 110: ovipositor, ventral view; 111–113, 117–119: female internal copulatory organs; 114–116 spermatheca: 110, 117 *Dasytiscus rufitarsis* (LUCAS), 111 *D. klapperichi* sp. n., 112, 114–116 *D. affinis* MORAW. (114 Bulgaria, 115 Greece, 116 USSR), 118 *D. minotaurus* sp. n., 119 *D. heydeni* REITT. (AGL – accessory gland, BCO – bursa copulatrix, SED – seminal duct, SPC – spermathecal capsule, SPD – spermathecal duct, SPG – spermathecal gland, SPT – spermatheca, VAG – vagina). Scale in mm.



Figs 120–126: female copulatory organs: 120 *Dasytiscus pallens* sp. n., 121 *D. bladili* sp. n., 122 *D. schererii* sp. n., 123 *D. abeillei* BOURG., 124 *D. fallax* sp. n., 125–126 *D. hebraicus* BOURG. (125-winged specimen from Israel, Haifa, 126 apterous holotype of *Dasytiscus hybridus* REITTER), 127 *D. jordanicus* sp. n. (BCO – bursa copulatrix, SED – seminal duct, VAG – vagina). Scale = 1 mm.